

**El Salvador**  
**Program Monitoring and Evaluation Plan**  
**(February 2011)**  
**Version 4**

<b>Table of Contents</b>	<b>Page</b>
1. Overview	2
2. Summary of the Program and Objectives	2
3. Economic Analysis	4
4. Beneficiaries	9
5. Monitoring Component	12
5.1. Indicators	12
5.2. Baselines and Targets for Performance	13
5.3. Disaggregating Data by Gender, Income, and Age	21
5.4. Data Quality Reviews	22
5.5. Progress Reports	22
5.6. Linking Disbursements to Performance	23
6. Evaluation Component	24
6.1. Special Studies	24
6.2. Mid-Term Evaluation	24
6.3. Final Impact Evaluations	25
7. Qualitative Information Gathering	26
8. Risks	26
9. Implementation and Management of M&E	28
9.1. Responsibilities	28
9.2. Review and Revision of the M&E Plan	29
9.3. The M&E Information System	29
9.4. Coordination of M&E Data Gathering	31
10. Budget	33

Annex No 1 Assumptions of the Original Compact Economic Analysis

Annex No 2 Design of Final Impact Evaluations

Annex No 3 Indicator Tables

Annex No 4 M&E Plan Revision #1 – June 2008

Annex No 5 M&E Plan Revision #2 – March 2009

Annex No 6 M&E Plan Revision #3 – February 2011

## **1. Overview**

MCC and the Government of El Salvador shall formulate, agree to and the Government shall implement this M&E Plan that specifies: i) How progress toward the Compact Goal, Objectives, and the intermediate results of each Project and Project Activity will be monitored; ii) A methodology, process and timeline for the evaluation of planned, ongoing, or completed Projects and Project Activities to determine their efficiency, effectiveness, impact and sustainability; and iii) Other components of the M&E Plan described below.

The M&E Plan serves the following functions:

- Explains in detail how MCC and FOMILENIO will monitor the various Projects to determine whether they are achieving their intended results and measure their larger impacts over time through evaluations.
- Outlines any M&E requirements that FOMILENIO must meet in order to receive disbursements.
- Serves as a guide for program implementation and management, so that FOMILENIO staff, Board of Directors members, Advisory Council members, Implementing Entities staff, beneficiaries, and other stakeholders understand the objectives and targets they are responsible for achieving, and are aware of their progress towards those objectives and targets during implementation.
- Establishes a process to alert implementers, stakeholders and MCC to any problems in program implementation and provides the basis for making any needed program adjustments.

This M&E Plan is considered a binding document, and failure to comply with its stipulations could result in suspension of disbursements. It may be modified or amended as necessary only with the approval of MCC and if it is consistent with the requirements of the Compact and any other relevant supplemental legal documents.

## **2. Summary of the Program and Projects**

The El Salvador Compact Program focuses on the Northern Zone of El Salvador, a region that includes one-half of El Salvador's poorest municipalities, that has suffered most from the internal conflict during the 1980s, and whose sustainable development potential is underutilized.

The primary goal of the Compact is to advance economic growth and poverty reduction in the Northern Zone of El Salvador. More specifically, the three project-level objectives are to:

1. Increase human and physical capital of residents to take advantage of employment and business opportunities, for the Human Development Project
2. Increase production and employment in the Northern Zone, for the Productive Development Project
3. Reduce travel cost and time within the Northern Zone, with the rest of the country, and within the region, for the Connectivity Project.

**The Human Development Project** is designed to increase knowledge, skills and access to basic services and community infrastructure. The main activities and sub-activities of this project are:

- Education and training: To increase education and skill levels of the poor in the Northern Zone by expanding the quality and access to vocational and technical education; development informal skills in businesses areas through internships, on-the-job training and mentoring; and technical assistance to institutions and organizations involved in policy, planning and administration of education and training in the Northern Zone; and
- Community Development: To increase the access to water and sanitation infrastructure to poorest inhabitants that will save money and time, and reduce health diseases; extend electricity to rural households that will have financial savings and is expected to increase their productive; and finance feasibility studies, technical assistance and construction of small strategic project such as feeder roads and drainage systems, that will reduce physical barriers to access to markets, employment, education and health care facilities, and will protect natural resources.

**The Productive Development Project** will assist with the development of profitable and sustainable productive business ventures, with a primary focus on poor individuals and organizations that benefit poor people. The main activities and sub-activities of this project are:

- The Service Providers will provide i) Production and Business Services: pre-investment studies, technical assistance and training for the development and implementation of business plans of beneficiaries; ii) Investment support: to provide investment capital to competitively selected individuals or organizations who are hindered by a lack of liquid assets and insufficient collateral; and iii) Financial Services: to provide financial enhancements to support increased lending activity by financial institutions in the Northern Zone such as guarantee funds (PROGARA-Programa de Garantía Agropecuaria and SGR-Sociedad de Garantías Recíprocas) and agricultural insurance for vegetable farmers; and iv) financial intermediary technical assistance, to provide specialized short-training workshops to bank, non-bank and non-governmental financial intermediaries in the Northern Zone that are working to expand rural finance and improve credit analysis, introduce new technologies for service delivery, or develop specialized products that increase beneficiary access to financial services.

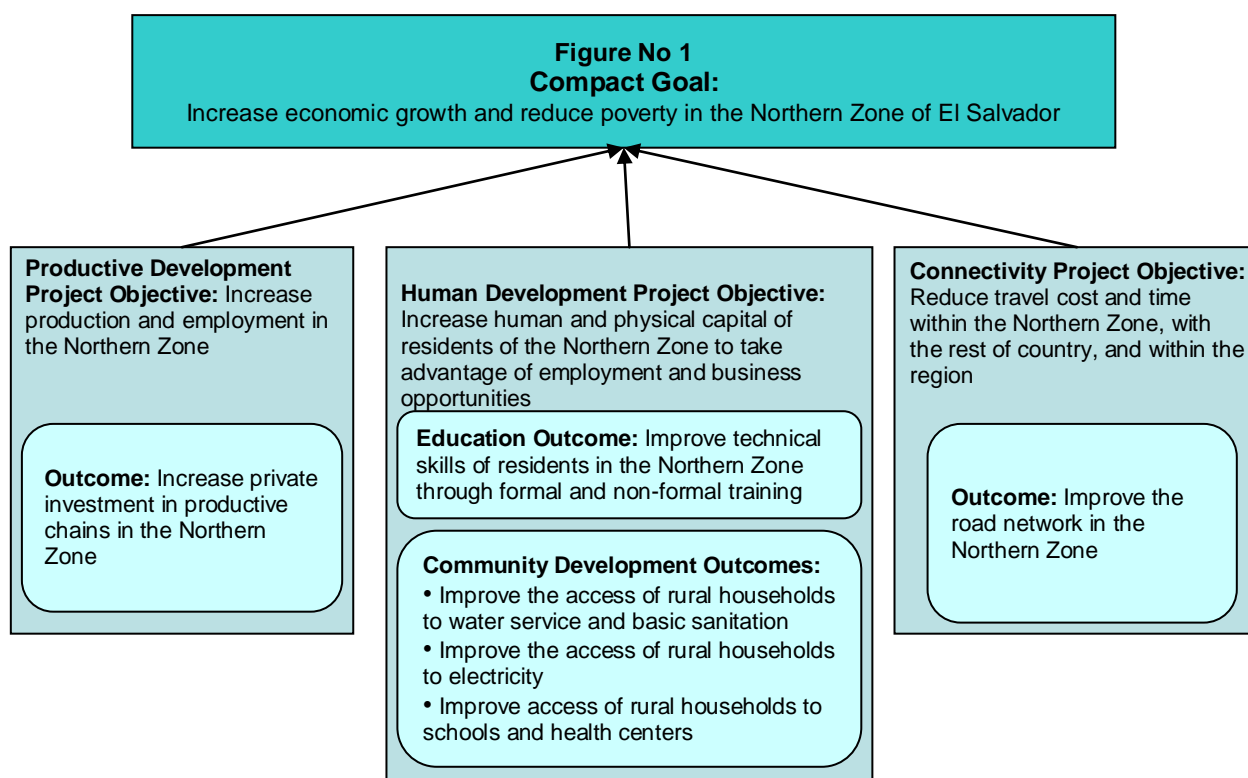
**The Connectivity Project** comprises construction of the following projects:

- The Northern Transnational Highway (NTH), a two lane paved road which will serve as a transport artery within the Northern Zone and will augment international connectivity through Honduras in the east; will connect with roads to southern El Salvador, to the new Pacific Ocean port at La Union in the eastern El Salvador, to the Caribbean ports of Puerto Barrios in Guatemala and Puerto Cortez in Honduras; and

- A Network of Connecting Roads (NCR), that will provide reliable paved roads to foster the connection of remote municipalities and rural villages of the Northern Zone with the NTH and other traffic routes to promote a more complete integration of the communities in the Northern Zone with the national development strategy. The main activities for the 290 km of the NTH are: design and construct openings of 50 km of secondary roads, improve 160 km to secondary road standards, and rehabilitate 80 km to secondary road standards. The main activity for the NCR is improving 240 km to modified tertiary road standards.

In March 2009, the Connectivity Project was restructured and the Network of Connecting Roads is no longer part of the Program.

The Compact Goal, Objectives, and Outcomes of the Program can be summarized as follows in Figure 1:



### 3. Economic Analysis

The lags in development of the Northern Zone of El Salvador may be explained by the absence of basic infrastructure (primarily roads, water, sanitation and electrification in some areas), the legacy of the civil war, and insufficient knowledge on the part of rural farmers about farming techniques and market opportunities.

The remoteness of the region will be significantly reduced with the construction of the Northern Transnational Highway and a network of connecting roads. This is likely to bring income earning opportunities that are difficult to predict in advance. The water, sanitation and electricity components, while unlikely to stimulate income growth by themselves, are necessary conditions for income growth and greater participation of the poor in economic activity.

Summaries of economic rates of return (ERRs) of the three Projects of the El Salvador Compact and the number of years considered in the cash-flow analysis are shown in Table 1.

<b>Table 1. Project Economic Rate of Return (ERR) <sup>1 2</sup></b>				
	<b>MCC Web Site <sup>3</sup></b>		<b>Mid Term Review March 2010</b>	
<b>Project/ Sub-Activity</b>	<b>ERR</b>	<b>Years</b>	<b>ERR</b>	<b>Years</b>
<b>Human Development Project</b>	16.0%			
Formal Technical Education	6.5%	20	11.5% <sup>4</sup>	40
Non Formal Skills Development	35.7%	20	18.3%	20
Water and Sanitation	13.0%	20	5.7% <sup>5</sup>	20
Rural Electrification	23.6%	20	18.4%	20
Community Infrastructure	9.0%	20	15.2%	20
<b>Productive Development Project <sup>6</sup></b>	13.0%	20	13.0%	20
<b>Connectivity Project</b>	23.9%	20	15.9%	20
<b>Program</b>	19.9%		N/A	

### **Formal Technical Education**

The updated mid-term review ERR for the formal technical education sub-activity is 11.5 percent over 40 years with Compact administration included. The benefits included are increased future incomes of new graduates who have obtained additional education (two years of study in higher technical education –ITCHA- and three years of study in a middle technical school). The Ministry of Education and MCC education consultants estimated the amount of the scholarships required and the expected increase in enrollment. It is projected that there will be 830 new graduates of technological education in 2012 and

<sup>1/</sup> The detailed assumptions to estimate the ERR are shown in Annex No 1 and more detailed explanation of the ERR may be found on the MCC website at <http://www.mcc.gov/programs/err/err-elsalvador.php>

<sup>2/</sup> All of these ERRs include Compact Administration costs.

<sup>3/</sup> The original ERR were estimated for an investment horizon of 25 years. See <http://www.mcc.gov/mcc/panda/activities/err/err-countries/err-elsalvador.shtml>. The investment horizon of ERRs shown in this table is 20 years.

<sup>4/</sup> The ERR estimates for Formal Education includes the scholarship program and infrastructure strengthening after reviewed by MCC economists. It does not separated each ERR, it will be shown as one ERR as of Formal Education.

<sup>5/</sup> MCC economics has estimated the ERR as 5.7% using MCC's most up-to-date methodology which does not consider consumer surplus as a benefit. The MCC guidance on consumer surplus was developed and issued subsequent to approving the compact in El Salvador (April 2009, vs. Nov. 2006 compact signature). If full consumer surplus is added, the ERR for water and sanitation is calculated at 11.4%.

<sup>6/</sup> Weighted average of fruit, vegetables, dairy, and forestry. These original ERRs include 30% of Technical Assistance Overhead. The updated MTR estimation of PDP's ERR is under elaboration by an independent reviewer.

4,944 graduates of 20 middle technical schools at 2012, as a result of the MCC program. Of the students of higher technical education, 73 percent are expected to complete their studies and 70 percent are expected to find employment one year after graduation. For the middle technical schools the outcomes for graduation are for the three-year middle-tech education and for middle general education is 71 percent; the employment rate for middle education is 66 percent. The scholarship program will benefit 4,377 students (932 in ITCHA, ITCA-FEPADE & ENA; and 3,445 in middle technical schools).

Based on information in the Northern Zone household survey of 2008 (EHPM ZN-2008), monthly income of persons with 15 years of study was around USD 535; for 12 years of study was USD 332 and USD 247 for those with 9 years of study and employment rate of 54%. The main benefit not quantified is increased quality of education through instructor training.

### **Non-Formal Skills Development**

The updated mid-term review ERR of the informal skill development sub-activity agreed with MCC is 18.3 percent over 20 years including Compact administration costs. The benefits included are increased future incomes of graduates of informal and training activities through formal jobs or self-employment.

It is projected that there will be 8,400 inhabitants of Northern Zone enrolled in non formal and training activities, of which 82% will graduate. Around 19.3 percent of the graduates will be employed and their incomes will increase from US\$ 88 a month to US\$ 219 for self-employed and US\$ 285 for those who obtain a formal job. The data on salaries are from the 2007 Northern Zone Household Multi-purpose survey (EHPM ZN-2007) and from INSAFORP's Impact Evaluation Study.

### **Water and Sanitation**

The updated mid-term review ERR of the water and sanitation sub-activity is 5.7 percent over 20 years, including Compact administration costs. Benefits include saved expenditures (purchasing water from a cistern truck and health care costs), time saved in carrying water from rivers or public faucets, reduced incidences of water-borne disease (diarrhea) and reduction in lost income due to absenteeism to work or school. The sub-activity will provide piped water for households that previously bought water from trucks or who carry water from a stream or a natural (and possibly contaminated) water source.

Data from rural households in the 2007 Northern Zone multi-purpose household survey (EPMH ZN-2007), were used to obtain expenditures per month on water by type of water service. This was combined with information on prices to estimate consumption by source. It was estimated for example that rural households who buy and carried water consume an average of 9.2 cubic meters per month at an average price of USD 1.7/m<sup>3</sup>. The cost for service from piped water to the household is on average USD 0.43/m<sup>3</sup> (excluding the public subsidy), implying a large saving on expenditure for households that make this transition. Although precise demand curve estimates are not available, quantity demanded was assumed to rise with the price reduction, to approximately 23 cubic meters per month. Since substantial economic benefits emanate from the reduction in the price, it is an important variable to monitor as the project is implemented. The 5.7% ERR does not include consumer surplus as a benefit, which follows MCC's most up-to-date

methodology for ERRs. The MCC guidance on consumer surplus was developed and issued subsequent to approving the compact in El Salvador (April 2009, vs. Nov. 2006 compact signature). Other multilateral development banks consider consumer surplus a relevant benefit to be included within economic analysis (World Bank, ADB, and IDB). FOMILENIO originally proposed adding 50% of estimated consumer surplus, as a compromise position between MCC's recently issued guidelines, and the guidelines of these other international financial institutions. If full consumer surplus is added, the ERR for water and sanitation is calculated at 11.4%.

Other benefits include saved time for households that would not have to carry water from a public source and reduced incidences of water borne diseases. The saved time was estimated from survey questions on the average time spent carrying water and average wages in Northern Zone. The value of reduced water borne diseases was estimated by the reasoning that reducing the number of households without water would reduce water borne diseases (assumed to be proportional) and reduce costs associated with visits to clinics, hospital and medicines.

There are additional benefits and costs that are not quantified. Possibly the most important benefits are the long-term gains in labor productivity from improved health. Improved health can serve to increase and facilitate human capital investments and reduce absenteeism due to sickness. Additionally, the losses in income from businesses that currently supply water at higher costs to poorer residents are not quantified. These businesses would clearly lose income with an improved water supply.

The model currently assumes cost reductions based on price trends revealed during first 10 small works procurement processes. If this assumption is removed and original cost estimates are applied (a more conservative assumption), the ERR is calculated to be 6% including half of consumer surplus, or 3.3% without.

## **Rural Electrification**

The updated mid-term review economic return of the rural electrification sub-activity agreed with MCC is 18.4 percent over 20 years, including Compact administration costs.

In the without-project scenario, a household uses some combination of candles, gas or kerosene lamps and car batteries for its electricity and energy needs. Information from the 2007 Northern Zone household and multi-purpose survey (EHPM ZN-2007) indicates that the average household without electricity spent USD 10.22 and consumed 2.11 Kilowatt-hours (kWh) per month. The latter calculation used conversion factors to convert consumption of candles, gas and batteries to Kilowatt-hour equivalents. These figures imply that the average price was USD 4.84 per kWh.

In the with-project scenario, prices are estimated to decline to USD 0.16 per kWh. Electricity expenditures saved, given the decline in price from the without to with-project scenario, are the main driving force behind the economic returns. Others sources of ERRs are the increased income from new productive activities based on electricity realized by the households and also the increase in productivity per household. These are both measured by 50 percent of the net economic benefit of the increase of electricity consumption from without to the with-project scenario.



## Community Infrastructure

The updated mid-term review economic return of the community infrastructure sub-activity agreed with MCC is 15.2 percent over 20 years, including Compact administration costs. The benefit includes saved time on access to schools and health centers as measured by using an annual average opportunity cost of USD 1052.

## Productive Development

The original ERR of the productive development project is 13 percent over 19 years, including Compact administration costs. The updated mid-term review ERR estimation is under elaboration by an independent reviewer and is scheduled to be completed in October 2010 after which this M&E Plan will be updated.

The purpose of the economic analysis of the productive development project is to determine whether investments in agriculture and micro/small/medium businesses in the Northern Zone could yield high returns. Four illustrative product lines were selected for simulations: Fruits, Horticulture, Dairy and Forestry. Specific investments were selected for these product lines. Recurrent costs, increases in productivity and incomes from sales of agricultural products less annual opportunity cost of farmers (USD 720) are direct results of these investments.

The economic rate of returns in the simulations (Table 2) are driven by the conclusion that there are substantially more valuable uses of the land than the currently practiced cultivation of basic grains. FOMILENIO used during MTR exercise the original ERR changing the investment horizon from 25 to 20 years for fruit, dairy, forestry and horticulture sectors. Independent revision of Productive Development Project ERR's will establish the final estimations.

<b>Table 2. Economic Rate of Return of Productive Development Project</b>		
<b>Product Line</b>	<b>Budget Weights</b>	<b>ERRs 20 years</b>
Fruits	25.4%	13.7%
Dairy	25.0%	18.0%
Forestry	24.0%	16.7%
Horticulture	25.6%	9.4%
Weighted Average	100%	14.4%

## Connectivity

The updated mid-term review ERR of the connectivity project is 16 percent over 20 years, including Compact administration costs. The project includes only the Northern Transnational Highway (NTH).

The Highway Development Model (HDM-4) was used for the economic analysis. Benefits quantified in the HDM-4 model include: savings in vehicle operating costs for travel on NTH (combustibles, lubricants, tires, depreciation, maintenance and repair) due to smoother roads and saved travel time due to higher velocities on improved roads. The vehicle operation cost on the NTH for pickup will decrease from US\$ 0.49 per km in 2007 to \$0.37 per km in 2012. Average annual daily traffic (AADT) was estimate for Consulta-

Parsons Traffic Study. The traffic will increase from 270 vehicles per day in 2007 to 962 vehicles per day in 2012. The average International Roughness Index (IRI) of NTH will decrease from 11.5 m/km in 2007 to 2.8 m/km in 2012.

#### 4. Beneficiaries

The combined impact of the projects in the El Salvador Compact will indirectly benefit all inhabitants of the Northern Zone (approximately 845,000).

The Northern Zone has worse economic and social indicators than the national average, as shown in Table 4. Forty five percent of the households (434,000 people) in the Northern Zone are poor and 17 percent of households (173,200 people) experience extreme poverty. Human capital development is also lower: the average level of schooling in El Salvador is 5.9 years, but the Northern Zone average is only 4.3 years. Additionally, the illiteracy rate of the Northern Zone is 1.6 times the national average (18.3 versus 11.1, respectively).

<b>Table 4. Main Economic and Social Indicators of the Northern Zone</b>		
	<b>Northern Zone</b>	<b>El Salvador</b>
<b>VI Population Census and V Housing Census – 2007</b>		
# of Municipalities	94	262
# of Inhabitants	845,621	5,774,113
% of Women	52.6	52.7
# of Economically Active Persons	193,456	1,909,256
% of Women	31.7	40.1
# of Households	192,080	1,406,485
% of Women Headed Households	36.9	34.9
% of Households without drinking water	12.4	8.0
% of Households without private sanitation	23.2	14.2
% of Households without own electricity connection <sup>7</sup>	24.5	19.4
% of Occupied in Agriculture Sector	39.2	16.6
% of Occupied in Manufacture Sector	8.8	15.8
% of Occupied in Services Sector	52.0	67.6
% of Unemployed	11.8	9.5
<b>Multi-Purpose Household Survey – 2007</b>		
% of Households in Extreme Poverty <sup>8</sup>	17.2	10.8
% of Households in Relative Poverty <sup>9</sup>	27.6	23.8
% of Households Non Poor <sup>10</sup>	55.3	65.4
Per-capita Monthly Income (USD)	87.7	120.3
Average Level of Schooling (# Years)	4.3	5.9
% of Illiteracy Rate (10 years old and more)	18.3	11.1
Average Monthly Earning in Agriculture	111.1	119.6
% of Households that receive Remittances	41.3	26.7

<sup>7</sup> It does not consider direct electricity connection and solar panel.

<sup>8</sup>/ Households with income below food basic basket for urban or rural areas.

<sup>9</sup>/ Households with income greater than food basic basket, but below widen basic basket (equal 2 food basic basket) for urban or rural areas.

<sup>10</sup>/ Households with income greater than widen basic basket for urban or rural areas

The Northern Zone also fares worse than the rest of the country in terms of access to basic services. In 2007, 12 percent of households in the Northern Zone did not have access to drinking water, 23 percent did not have private sanitation and about 24.5 percent had no direct electricity connection or solar panel.

The per capita monthly income in the Northern Zone is 73 percent of the national average. Of the economically active persons in the Northern zone about 39.2 percent are employed in agriculture. The national average occupation rate for agriculture is 16.6 percent. Most of those employed in agriculture in the Northern Zone are involved in very low productivity activities. The average monthly earning of those occupied in agriculture in the Northern Zone is US\$111.1 compared to the national average of US\$ 119.6. A larger proportion of households in the Northern Zone receive remittances, an indication that the region is a significant source of emigration flows.

The estimations of beneficiaries of each Compact Project are (Table 5):

The Formal Technical Education Sub-Activity is expected to impact approximately 12,500 students of technical schools (3,600 scholarship granted and 8,900 students from 20 middle technical schools and ITCHA infrastructure strengthening), and 500 instructors of middle technical schools (teachers, administrative staff and parents of students).

The flexible and short-term training provided under the Non-formal Skills Development Sub-Activity is expected to benefit 8,400 persons. Priority groups will include the poor, women, youth at risk (migration or gang participation), unemployed persons (irrespective of age) and secondary school age youth.

The investments made under the Water and Sanitation Sub-Activity are expected to benefit 30,600 or more rural residents (over 6,900 households) in the Northern Zone. Projects will be located in municipalities classified by poverty level.

<b>Table 5. Compact Beneficiaries <sup>11</sup></b>		
<b>Project/Sub-Activity</b>	<b>Number of Participants after the Mid-Term Review<sup>12</sup></b>	<b>Number of Beneficiaries after the Mid-Term Review<sup>13</sup></b>
<b>1. Human Development Project</b>		243,395
Formal Technical Education	12,500 students 500 instructors	17,600
Non-Formal Skills Development	8,400	5,771
Water and Sanitation	30,600	30,600
Rural Electrification	121,421	121,421
Community Infrastructure	80,400	113,581 <sup>14</sup>
<b>2. Productive Development Project</b>	13,500	47,628
<b>3. Connectivity Project</b>	456,000 within 5 km	644,190 <sup>15</sup> within 5 km
Total Compact Beneficiaries Estimated		794,811

The Government estimates that over 26,376 rural households in the Northern Zone (roughly 14.36% of the 2007 population) could receive electricity service through the Rural Electrification Sub-Activity: 15,000 households will be connected to new distribution networks, 9,426 will be connected to new extended distribution networks (1,415 km of new lines), and 1,950 households in isolated communities or located near protected areas will receive solar power systems. To the extent that FOMILENIO is unable to reach the final target because there are too few households to connect, the Government of El Salvador and executing entities as a responsibility of the country will contribute to achieving the target by 2012.

The Community Infrastructure Sub-Activity will benefit over 113,581 residents (over 18,200 households).

<sup>11/</sup> Not all of the beneficiaries for each project will receive the increases in income included in the Indicator Tables 7, 8, and 9. For example, the increase in income of graduates of the Chalatenango Center and the middle technical schools applies to the sub-set of beneficiaries who graduate – not all 10,000 students.

<sup>12/</sup> It is assumed that there are 4.41 people per household, for Rural Electrification sub-Activity there has been considered 4.6 people per rural household.

<sup>13</sup> MCC's definition of a beneficiary is: "those individuals who realize improved standards of living, primarily through higher incomes, as a result of economic gains generated by the MCC-funded project." <http://www.mcc.gov/mcc/panda/activities/beneficiary/index.shtml> . The beneficiary estimates include population growth and exclude accounts for all double counting (within Human Development Project and between three Projects).

<sup>14</sup> This number includes population growth.

<sup>15</sup> This number includes population growth.

The principal beneficiaries of the Productive Development Project are expected to be 47,628 poor people employed in agriculture, non-farm activities, and micro, small and medium-sized enterprises (over 13,500 households).

The direct and immediate beneficiaries of the Connectivity Project will be the inhabitants of the Northern Zone, which covers an area of 7,500 square kilometers, over one-third of the national territory. After restructuring the Project, it is estimated that the 644,190 people living within 5 kilometers of the Northern Transnational Highway will be the primary beneficiaries of this activity.

In addition, Salvadorans beyond the Northern Zone's boundaries will benefit from the integration of the Northern Zone and its people into a sustainable development process for El Salvador and the Central American region. The improvements to the road network in the Northern Zone will contribute to improving life in six departments of the country.

There is an obvious overlap of project beneficiaries including those from the connectivity and human development projects. This is intentional since the Compact includes multiple beneficiaries across sub-activities, such as those receiving water and sanitation and non formal development skills. Additionally, the productive development project links beneficiaries of formal technical education with those from the electricity component. The design of the impact evaluation will attempt to disaggregate the measured effects of the Compact's programs on these beneficiaries, taking into account the inherent constraints, to demonstrate individual attributable project impacts.

FOMILENIO will develop a beneficiary register with the purpose of counting and characterizing (age, gender, income, geographical location, etc.) the beneficiaries of each of the three projects of the Program. In addition, it will be used to identify if the same people or household received benefits from more than one sub-activity (overlap).

## **5. Monitoring Component**

The Monitoring Component will guide FOMILENIO in the process of monitoring and periodically evaluating its achievement of the Compact's Goal and Objectives. The overall performance of the Program will be monitored systematically, regularly, and on an on-going basis through the indicator tracking system. This will permit managers of FOMILENIO to make programmatic adjustments as necessary with the view toward improving the overall impact of the program.

### **5.1. Indicators**

The M&E Plan will measure the results of the Program using quantitative and qualitative data and performance indicators. The indicators will measure and report at five levels: Goal/Impact, Objective, Outcome, Output and Process. The indicators for the Compact Goal will measure the overall impact of the Program and each Project. The Objective indicators measure the final results of the Projects to monitor their success in meeting each of the Objectives, including results for the intended beneficiaries. The Outcome indicators will measure the intermediate results achieved under each of the Project Activities to provide an early measure of the likely impact of the Project Activities. The Output indicators measure the direct outputs of the Project Activities and Sub-Activities. The Process indicators measure process milestones of the Project Activities and Sub-Activities during the first two years.

All indicators with their definitions and sources are listed in Annex 3.

## 5.2. Baselines and Targets for Performance

The El Salvador Compact has two Goal Indicators.

<b>Table 6. Compact Goal Baselines and Targets for the Program<sup>16</sup></b>				
<b>Goal/Impact Indicators <sup>17</sup></b>	<b>Definitions</b>	<b>2004</b>	<b>2012</b>	<b>2017</b>
Poverty rate in the Northern Zone	Percentage of households of the Northern Zone whose income falls below the poverty line as calculated by the General Directorate for Statistics and Census ("DIGESTYC")			
with the Program		53%	46%	43%
without the Program		53%	52%	51%
Annual per capita income of Program beneficiaries in the Northern Zone	Average annual per capita income in the Northern Zone as calculated by DIGESTYC.			
with the Program		\$ 720	\$ 808	\$ 843
without the Program		\$ 720	\$ 736	\$ 748

Each Project has Goal/Impact, Objective, Outcome, Output and Process Indicators. The baselines and the targets for the indicators of Human Development Project are shown in Tables 7.1 and 7.2.

<b>Table 7.1. Human Development Project Baselines and Targets</b>			
<b>Project Activity: Education and Training</b>			
<b>Goal Indicators</b>	<b>Definitions</b>	<b>2007</b>	<b>2012</b>
Incremental income of graduates of the Chalatenango Center	Percentage of increase in yearly income earned by graduates of the Chalatenango Center (technological education institutes) compared to graduates of 12 <sup>th</sup> grade	0	40%
Incremental income of graduates of middle technical schools	Percentage of increase in yearly income earned by graduates of middle technical schools compared to graduates of 9 <sup>th</sup> grade	0	64%
Incremental income of non-formal trained beneficiaries	Percentage of increase in yearly income earned by non-formal trained beneficiaries compared to previous income.	0	35%
<b>Objective Indicators</b>		<b>2007</b>	<b>2012</b>

<sup>16/</sup> Targets for Compact Goal Indicators may be revised after updating the PDP-ERR.

<sup>17/</sup> The targets for the Goal/Impact Indicators may be revised after a review of the methodology used to make the impact projections is completed.

**Table 7.1. Human Development Project Baselines and Targets**  
**Project Activity: Education and Training**

Employment rate of graduates of the Chalatenango Center	Percentage of graduates of the Chalatenango Center (functioning as a MEGATEC institute) employed one year after graduation	70%	70%
Employment rate of graduates of middle technical schools	Percentage of graduates of middle technical schools remodeled by the Project Activity employed one year after graduation	66%	66%
Employment rate of non-formal trained beneficiaries	Percentage of non-formal trained beneficiaries employed one year after the training.	19%	19%
Employed graduates of MCC-supported training programs	Number of MCC-supported training program graduates employed one year after graduation. This indicator is aimed to employed graduates from non-formal training.	0	1,875
<b>Outcome Indicators</b>		<b>2007</b>	<b>2012</b>
Graduation rates of the Chalatenango Center	Percentage of graduates of the Chalatenango Center in relation to total enrollment in the first year.	73%	73%
Graduation rates of middle technical schools	Percentage of graduates of the middle technical schools in relation to total enrollment in the first year.	71%	71%
Non-formal trained students that complete the training.	The number of non-formal trained students that completed the training.	0	6,888
Tertiary and secondary school graduates in MCC-supported educational facilities.	The number of students graduating from the highest grade (year) for that educational level in MCC-supported educational facilities. It includes graduated students from Chalatenango Center and Middle Technical Schools. (cumulative)	0	6,795
Students of the Chalatenango Center	Total number of students enrolled in 2012 in the Chalatenango Center (functioning as a MEGATEC institute) (not cumulative)	264	540
Students of middle technical schools	Total number of students enrolled in 2012 in the middle technical schools included in the Project Activity (not cumulative)	7,600	9,413

Output Indicators	Definitions	Year 1	Year 2	Year 3	Year 4	Year 5	Y1-Y5
		Oct 07/ Sep 08	Oct 08/ Sep 09	Oct 09/ Sep 10	Oct 10/ Sep 11	Oct 11/ Sep 12	
Technologic institutes remodeled and equipped	Chalatenango technological institute remodeled and equipped and the construction of MEGATEC in Chalatenango by FOMILENIO Program	0	0	0	1	0	1
Middle technical schools remodeled and equipped	Number of middle technical schools remodeled by FOMILENIO Program	0	0	20	0	0	20
Educational facilities constructed / rehabilitated and / or equipped through MCC-supported activities	Number of unique educational facilities constructed, rehabilitated, and / or equipped according to standards stipulated in MCA contracts signed with implementers. This indicator combines the two indicators "Technologic institutes remodeled and equipped" and "Middle technical schools remodeled and equipped" and includes the improvements to ITCHA	0	0	21	1	0	22
Number of instructors trained or certified through MCC-supported activities	Total number of unique classroom instructors who complete MCC-supported training and/or certification requirements focused on instructional quality as defined by the Compact training activity (e.g. training in improved pedagogical methods, delivering revised curricula, etc.)	0	0	500	0	0	500
New scholarships granted to students of technological education	Number of unique students that receive scholarships of first/second/third year of technological education institutes	110	84	310	428	0	932
New scholarships granted to students of middle technical education	Number of unique students that receive scholarships of first/second/third year of middle technical schools	0	150	921	1,450	924	3,445
Students of non-formal training	Number of unique students who participate in non-formal training as part of the Project Activity (cumulative)	0	970	2,933	4,213	284	8,400
Number of students participating in MCC-supported education activities	Cumulative total number of unique students enrolled or participating in MCC-supported educational programs. This indicator includes the students enrolled in middle technical schools, MEGATEC, non-formal training, and scholarship recipients enrolled in schools different from those listed above.	110	1,314	12,781	21,796	26,927	26,927



Output Indicators	Definitions	Year 1	Year 2	Year 3	Year 4	Year 5	Y1-Y5
		Oct 07/ Sep 08	Oct 08/ Sept 09	Oct 09/ Sep 10	Oct 10/ Sep 11	Oct 11/ Sep 12	
Additional female students enrolled in MCC-supported educational facilities – technological education	Additional unique female students enrolled in MCC-supported technological educational facilities. This indicator includes only female students who have received scholarships (cumulative)	43	71	209	359	359	359
Additional female students enrolled in MCC-supported educational facilities – middle technical schools	Additional unique female students enrolled in MCC-supported middle technical educational facilities. This indicator includes only female students who have received scholarships (cumulative)	0	54	544	1104	1464	1464
Process Indicators	Definitions	Year 1	Year 2	Year 3	Year 4	Year 5	Y1-Y5
		Oct 07/ Sep 08	Oct 08/ Sept 09	Oct 09/ Sep 10	Oct 10/ Sep 11	Oct 11/ Sep 12	
Scholarship Program Administrator designated.	Date contract or grant agreement signed with the entity or entities competitively selected to administer scholarship program for academic year 2009 and beyond.		Nov/15/ 08				
Diagnostic-Based Implementation Plan approved by MCC.	Date compact-referenced plan based on the results of the diagnostic is approved. Includes identification of 20 middle technical schools to be strengthened and technical careers. (CIDE Deliverables 4 and 17)		Apr/30/ 09				
Value of signed contracts for MCC-supported educational facility construction/rehabilitation and/or equipping	Value of signed contracts, in US Dollars, for educational facility construction or rehabilitation and/or equipping (e.g. information technology, desks and chairs, electricity and lighting, water systems, girls latrines, etc.).	n.a	n.a	n.a	n.a	n.a	n.a
Value of contracted construction / rehabilitation / MCC-supported educational equipping works disbursed.	The aggregate amount disbursed for all signed contracts for education facility works and/or equipping. In US Million Dollars.	n.a.	0.73	6.03	12.58	12.58	12.58
Percent of contracted construction / rehabilitation / MCC-supported educational equipping works disbursed.	The aggregate amount disbursed divided by all signed contracts for education facility works and/or equipping.	0	15.5	67.6	100	100	100

**Table 7.2. Human Development Project Baselines and Targets**  
**Project Activity: Community Development**

Goal Indicators	Definitions	2004		2012		
Increase in income of water and sanitation beneficiaries	Percentage increase in income of households receiving water and sanitation investments	0		15%		
Increase in income of electrification beneficiaries	Percentage increase in income of households who received connections to the electrical grid	0		13%		
Increase in income of community infrastructure beneficiaries	Increase in income of households located close to community infrastructure	0		4%		
Objective Indicators	Definitions	2004		2012		
Cost of water (US\$ per m <sub>3</sub> )	Price of water per cubic meter for beneficiaries that bought water before the Project Activity	\$1.68		\$0.43		
Domestic water consumption (m <sub>3</sub> )	Number of cubic meters of water per month paid by project beneficiaries	9.18		23		
Time collecting water (hours per week per household)	Hours per week spent collecting water by Project Activity household beneficiaries	4.58		0		
Incidence of water-borne diseases (times per year per person)	Reduction in the number of times a year beneficiaries are sick with intestinal parasitism, diarrhea and infectious gastroenteritis	0		-8.5%		
Reduction in days of school or work missed as a result of water-borne diseases (days per year per person)	Reduction of the number of days of school or work missed per year as a result of intestinal parasitism, diarrhea or infectious gastroenteritis per beneficiary	0		-39		
Cost of electricity (per kilowatt-hour)	Price of electricity per kilowatt-hour for beneficiaries	\$4.84		\$0.16		
Electricity consumption (kilowatt-hours per month)	Number of kilowatt-hours per month consumed on average by households connected to the electricity network by the Program	2		82		
Time saved accessing education and health centers (minutes per working day per beneficiary)	Reduction in minutes per working day dedicated to accessing education and health centers by beneficiaries of Community Infrastructure	0		20		
Outcome Indicators	Definitions	2008	2009	2010	2011	2012
Percentage of households with water in the Northern Zone (%)	Percentage of households with access to water (within the household, outside the household, from a neighbor, from a public faucet, or from a well) in Northern Zone per calendar year.	79%	79%	79%	82%	83%

Outcome Indicators	Definitions	2008	2009	2010	2011	2012
Percentage of households with basic sanitation in the Northern Zone (%)	Percentage of households with access to either private sewage drainage systems, latrines or septic tanks in the Northern Zone per calendar year.	82%	82%	82%	83%	83%
Percentage of households with electricity in the Northern Zone (%)	Percentage of households with a private electricity connection in the Northern Zone per calendar year.	78%	79%	81%	86%	90%
Outcome Indicator	Definitions	Year 1	Year 2	Year 3	Year 4	Year 5
		Oct 07/ Sep 08	Oct 08/ Sep 09	Oct 09/ Sep 10	Oct 10/ Sep 11	Oct 11/ Sep 12
Population benefiting from community infrastructure projects (cumulative people)	Number of beneficiaries from the community infrastructure projects (Feeder roads, small bridges, drainage system, etc)	0	0	0	42,540	80,437

Output Indicators	Definitions	Year 1	Year 2	Year 3	Year 4	Year 5	Y1-Y5
		Oct 07/ Sep 08	Oct 08/ Sep 09	Oct 09/ Sep 10	Oct 10/ Sep 11	Oct 11/ Sep 12	
Number of households with access to improved water supply	Number of households whose main source of drinking water is a private piped connection (into dwelling or yard), public tap/standpipe, tube-well / borehole, protected dug well, protected spring, or rainwater as a result of MCC investment(s).	0	0	0	3,164	3,771	6,935
Number of households with access to improved sanitation.	Number of households who get access to and use an improved sanitation facility such as flush toilet to a piped sewer system, flush toilet to a septic tank, flush or pour flush toilet to a pit, composting toilet, ventilated improved pit latrine, or pit latrine with slab and cover as a result of MCC investment(s).	0	0	0	850	1,117	1,967
Persons trained in hygiene and sanitary best practices	Number of persons who have completed training and have an understanding of hygiene and sanitary practices that block the fecal-oral transmission route.	0	0	0	850	1,117	1,967

Output Indicators	Definitions	Year 1	Year 2	Year 3	Year 4	Year 5	Y1-Y5
		Oct 07/ Sep 08	Oct 08/ Sept 09	Oct 09/ Sep 10	Oct 10/ Sep 11	Oct 11/ Sep 12	
Households benefited with the connection to the electricity network	Number of households benefited with the connection to the existing and extended electricity network by FOMILENIO <sup>18</sup>	0	1,308	4,000	10,600	8,518	24,426
Households benefited with the connection to the electricity network - GOES	Number of households benefited with the connection to the existing and extended electricity network achieved by GOES investment.	0	n.a	n.a.	n.a.	n.a	n.a.
Households benefited with the Installation of isolated solar systems	Number of households benefited with isolated solar systems	0	450	500	400	600	1,950

Process Indicators	Definitions	Year 1	Year 2	Year 3	Year 4	Year 5	Y1-Y5
		Oct 07/ Sep 08	Oct 08/ Sept 09	Oct 09/ Sep 10	Oct 10/ Sep 11	Oct 11/ Sep 12	
Potable water and basic sanitation systems with construction contracts signed	Number of water systems that have signed a construction, training and technical assistance contract.	0	0	25	15	11	51
Value of Water & Sanitation Construction Contracts Signed	The value of all contracts signed with contractors for water and sanitation works.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Value of Contracted Water & Sanitation Works Disbursed (US\$Million)	Amount disbursed for all signed contracts for water and sanitation works. (cumulative)	n.a.	n.a.	0.46	8.52	16.6	16.6
Percent of Contracted Water & Sanitation Works Disbursed	The aggregate amount disbursed divided by all signed contracts for water and sanitation works.	0	0	19	81	100	100

<sup>18</sup> To the extent that FOMILENIO is unable to reach the final target because there are too few households to connect, the Government of El Salvador and executing entities as a responsibility of the country will contribute to achieving the target by 2012.

Process Indicators	Definitions	Year 1	Year 2	Year 3	Year 4	Year 5	Y1-Y5
		Oct 07/ Sep 08	Oct 08/ Sept 09	Oct 09/ Sep 10	Oct 10/ Sep 11	Oct 11/ Sep 12	
Value of Water & Sanitation Feasibility and/or Detailed Design Contracts Signed	Value of all signed feasibility, design, and environmental contracts, including resettlement action plans, for water and sanitation investments.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Value of Contracted Water & Sanitation Feasibility and/or Detailed Design Disbursed (US\$Million)	Amount disbursed for all signed feasibility, design, and environmental contracts, including resettlement action plans, for water and sanitation investments (cumulative)	n.a.	0.94	2.11	4.6	5.7	5.7
Percent of Contracted Water & Sanitation Feasibility and/or Detailed Design Disbursed	Amount disbursed of all signed feasibility, design, and environmental contracts, including resettlement action plans, for water and sanitation investments divided by total value of all contracts awarded	0	38	39	80	100	100
Community Infrastructure works with construction contracts signed.	Number of community infrastructure works that have a signed construction contract.	0	0	34	44	0	78
Kilometers of new lines of electrical distribution construction contracts signed.	Number of kilometers of new electrical distribution lines that have a construction contract signed.	0	1,415	0	0	0	1,415
Solar PV systems installation and basic training contracts signed.	Number of Solar PV systems that have a signed installation and basic training contract.	0	450	500	1,000	0	1,950

The baselines and the targets for Goal, Objective, Output and Outcome Indicators for the Productive Development Project are shown in Table 8.

<b>Table 8. Productive Development Project Baselines and Targets</b>								
<b>Goal Indicators</b>	<b>Definitions</b>	<b>2004</b>				<b>2012</b>		
Increase in income of Productive Development beneficiaries (%)	Average percentage increase in annual income of project beneficiaries	0				15%		
<b>Objective Indicators</b>	<b>Definitions</b>	<b>2004</b>	Oct 07/ Sep 08	Oct 08/ Sept 09	Oct 09/ Sep 10	Oct 10/ Sep 11	Oct 11/ Sep 12	<b>2012</b>
Economic Rate of Return (%)	The definition and methodology for calculating the ERR will be in the PD Operations Manual and will be consistent with MCC's Guidelines for Economic Analysis and will be measured from Year 2 to Year 5	14%	n/a	14%	14%	14%	14%	14%
Employment created (number of jobs)	Number of full-time equivalent jobs created as a result of the Project	0	0	2,813	3,181	2,371	2,635	11,000
<b>Outcome Indicators</b>	<b>Definitions</b>	<b>2004</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>2012</b>
			Oct 07/ Sep 08	Oct 08/ Sept 09	Oct 09/ Sep 10	Oct 10/ Sep 11	Oct 11/ Sep 12	
Investment in productive chains by selected beneficiaries (Millions of UD\$)	Spending of MCC funds and counterpart contributions on inputs, equipment and infrastructure as laid out in business plans over the five years of the Compact	\$0	\$0	\$ 0	\$ 35	\$ 40	\$ 5	\$ 80
Number of farmers that have applied improved techniques	Total number of farmers or rural entrepreneurs that are applying new production or managerial techniques introduced by the Production and Business Support Activity (pilots and normal project), such as input use, production techniques, irrigation, post harvest treatment, and farm management techniques.	0	0	1,551	1,449	2,800	1,200	7,000
Number of enterprises that have applied improved techniques	Total number of farmers' associations, post-harvest or processing enterprises, or other rural enterprises that are applying managerial or processing techniques introduced by the Production and Business Services Activity (pilots and normal project).	0	0	14	30	50	20	114

Output Indicators <sup>19</sup>	Definitions	Year 1	Year 2	Year 3	Year 4	Year 5	
		Oct 07/ Sep 08	Oct 08/ Sept 09	Oct 09/ Sep 10	Oct 10/ Sep 11	Oct 11/ Sep 12	Y1-Y5
Activity 1 – Production and Business Support							
Number of beneficiaries of technical assistance and training	Number of beneficiaries who receive at least one type of assistance from the Production and Business Support Activity (pilots and normal project).	992	4,740	2,900	2,848	2,020	13,500
Number of farmers trained	Total number of producers (farmers, ranchers, fishermen, and other primary sector producers) or rural entrepreneurs who receive at least one type of assistance from the Production and Business Support Activity (pilots and normal project).	992	3,280	1,995	2,328	1,330	10,465
Number of beneficiaries of technical assistance and training – Non-agriculture <sup>20</sup>	Number of beneficiaries who receive at least one type of assistance from the Production and Business Support Activity (pilots and normal project). Non-agriculture includes sectors such as tourism and handicrafts	n.a	n.a	n.a	n.a	n.a	n.a
Number of beneficiaries of technical assistance and training – Agribusinesses	Number of agribusinesses who receive at least one type of assistance from the Production and Business Support Activity (pilots and normal project). Agribusinesses must be involved in value-added activities, such as the processing of tomatoes or milk.	0	54	30	125	75	284
Number of enterprises assisted	Total number of farmers’ associations, post-harvest or processing enterprises, water management entities, or other rural enterprises receiving technical or financial assistance. This indicator combines the indicators “Beneficiaries of technical assistance and training – Agribusinesses” and “Number of loans granted by the Investment Support Fund (FIDENORTE) – Agribusiness.” <sup>21</sup>	0	55	37	125	75	292

<sup>19</sup> In March 2009, MCC requested that FOMILENIO report on certain indicators for MCC's own results reporting on agriculture. These indicators do not have targets because PDP was not designed to have specific value-chain targets, but rather to focus on reaching the overall project objectives by maintaining flexibility between value-chains.

<sup>20</sup> Targets are going to be defined after ERR estimation.

<sup>21</sup> Targets are going to be modified after ERR estimation.

Number of hectares under production with support from PDP	Number of hectares under production with support from PDP including technical assistance and material support (pilots and normal project). <sup>22</sup>	0	7,643	4,145	2,701	511	15,000
<b>Activity 2 – Investment Support</b>							
Amount of Investment Support fund (FIDENORTE) approved.	Value of the FIDENORTE-funded part of the investment plans approved (Millions of US\$).	0	\$ 0.794	\$ 6.706	\$ 1.0	\$ 0	\$ 8.50
Amount of Investment Support fund (FIDENORTE) approved - Agriculture <sup>23</sup>	Value of the FIDENORTE-funded part of the investment plans approved for activities in agriculture (Millions of US\$).	n.a	n.a	n.a	n.a	n.a	n.a
Amount of Investment Support fund (FIDENORTE) approved – Non-agriculture <sup>24</sup>	Value of the FIDENORTE-funded part of the investment plans approved for activities in non-agriculture sectors, such as tourism and handicrafts (Millions of US\$).	n.a	n.a	n.a	n.a	n.a	n.a
Number of loans granted by the Investment Support Fund (FIDENORTE)	Number of loans that have been granted by FIDENORTE.	0	3	27	5	0	35
Number of loans granted by the Investment Support Fund (FIDENORTE) – Agriculture Producers	Number of loans that have been granted by FIDENORTE to agriculture producers.	n.a	2	12	2	0	16
Number of loans granted by the Investment Support Fund (FIDENORTE) – Agribusiness	Number of loans that have been granted by FIDENORTE's value chain activity (cadenas) to agribusiness involved in value-added activities.	0	1	7	0	0	8
Number of loans granted by the Investment Support Fund (FIDENORTE) – Non-agriculture	Number of loans that have been granted by FIDENORTE in non-agriculture sectors, such as tourism and handicrafts.	n.a	n.a	8	3	n.a	11

<sup>22</sup> Targets are going to be modified after ERR estimation.

<sup>23</sup> No need to define targets.

<sup>24</sup> No need to define targets.



Output Indicators <sup>25</sup>	Definitions	Year 1	Year 2	Year 3	Year 4	Year 5	Y1-Y5
		Oct 07/ Sep 08	Oct 08/ Sept 09	Oct 09/ Sep 10	Oct 10/ Sep 11	Oct 11/ Sep 12	
Value of agricultural and rural loans (US \$Million)	Total value of agricultural and/or rural loan funds for on-farm, off-farm, and rural investments. This indicator combines the indicators “Amount of Investment Support fund (FIDENORTE) approved – Agriculture” plus “Value of loans guaranteed – Agriculture)”	0	n.a	n.a	n.a	n.a	n.a
<b>Activity 3 – Financial Services</b>							
Number of guarantees granted	Number of guarantees granted with FOMILENIO funding, including PROGARA and SGR	0	419	690	3,000	1,000	5,109
Value of loans guaranteed (US\$Million)	Value of loans guaranteed with FOMILENIO funding, including PROGARA and SGR.	0	\$1.0	\$2.87	\$4.3	\$1.5	\$9.68
Value of loans guaranteed – Agriculture	Value of loans guaranteed with FOMILENIO funding, including PROGARA and SGR for agriculture-related activities.	n.a	n.a	n.a	n.a	n.a	n.a
Value of loans guaranteed – Non-agriculture <sup>26</sup>	Value of loans guaranteed with FOMILENIO funding, including PROGARA and SGR for non-agriculture-related activities.	n.a	n.a	n.a	n.a	n.a	n.a
Process Indicators	Definitions	Oct 07/ Sep 08	Oct 08/ Sept 09	Oct 09/ Sep 10	Oct 10/ Sep 11	Oct 11/ Sep 12	Y1-Y5
Service Providers 2 Contracted	Date Service Providers 2 is contracted by bidding process to implement activities of PRONORTE.	Sep/30/08					
FIDENORTE constituted	Date of constitution document legalized and initial amount registered.	Aug/31/08					
PROGARA NORTE constituted and capitalized with FOMILENIO's funds.	Date of creation of special program to attend beneficiaries of PDP within PROGARA.	Jul/31/08					

<sup>25</sup> In March 2009, MCC requested that FOMILENIO report on certain indicators for MCC's own results reporting on agriculture. These indicators do not have targets because PDP was not designed to have specific value-chain targets, but rather to focus on reaching the overall project objectives by maintaining flexibility between value-chains

<sup>26</sup> No need to define targets.

The baselines and the targets for Goal, Objective, Output and Outcome Indicators for the Connectivity Project are shown in Table 9.

<b>Table 9. Connectivity Project Baselines and Targets</b>			
<b>Goal Indicators</b>	<b>Definitions</b>	<b>2006</b>	<b>2012</b>
Increase in income of households near the Northern Transnational Highway	Increase in income of households within 2km of the Northern Transnational Highway	0	6%
Land prices along the Northern Transnational Highway	Average price of land (\$/m2) 2km on either side of the Northern Transnational Highway (weighted average of all road sections to be opened or improved)	\$3.22	\$3.40
<b>Objective Indicators</b>	<b>Definitions</b>	<b>2006</b>	<b>2012</b>
Travel time from Guatemala to Honduras through the Northern Zone (hours)	Number of hours required to travel from Guatemala to Honduras through the Northern Zone	11 hours 43 minutes	5 hours 42 minutes
Vehicle operating costs on the Northern Transnational Highway (US\$ per pick-up truck per km)	Cost per vehicle (pick-up truck) per km of combustibles, lubricants, tires, depreciation, maintenance and repair for travel on the Northern Transnational Highway	\$0.49	\$0.37
Annual average daily traffic on the Northern Transnational Highway (vehicles per day)	Average number of vehicles that transit the Northern Transnational Highway daily	270	962
<b>Outcome Indicators</b>	<b>Definitions</b>	<b>2006</b>	<b>2012</b>
Average International road Roughness Index (IRI) of the Northern Transnational Highway	Weighted average IRI of the entire Transnational Highway(m/km)	11.5	2.8

<b>Output Indicators</b>	<b>Definitions</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Y1-Y5</b>
		<b>Oct 07/ Sep 08</b>	<b>Oct 08/ Sept 09</b>	<b>Oct 09/ Sep 10</b>	<b>Oct 10/ Sep 11</b>	<b>Oct 11/ Sep 12</b>	
Kilometers of roads completed	The length of roads in kilometers on which construction or rehabilitation is complete.	0	0	13.4	39.8	142.47	195.6
<b>Process Indicators</b>	<b>Definitions</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Y1-Y5</b>
		<b>Oct 07/ Sep 08</b>	<b>Oct 08/ Sept 09</b>	<b>Oct 09/ Sep 10</b>	<b>Oct 10/ Sep 11</b>	<b>Oct 11/ Sep 12</b>	
Kilometer of Northern Transnational Highway with Final Design finished.	Kilometers of NTH with the final design of road opening, existing paved road rehab and upgrading of dust roads, finished (including GOES funded designs).	0	45	109.8	23.2	17.6	195.6
Kilometer of Northern Transnational Highway under design (contracted).	The length of roads in kilometers under design contracts. This may include building new roads, modifying existing roads, reconstruction, rehabilitation, resurfacing or upgrading.	n.a	n.a	n.a	n.a	n.a	n.a

Process Indicators	Definitions	Year 1	Year 2	Year 3	Year 4	Year 5	Y1-Y5
		Oct 07/ Sep 08	Oct 08/ Sept 09	Oct 09/ Sep 10	Oct 10/ Sep 11	Oct 11/ Sep 12	
Kilometer of roads under works contracts.	The length of roads in kilometers under works contract for construction or rehabilitation. This may include building new roads or modifying existing roads.	0	44.6	133.5	17.57	0	195.6
Value of signed contracts for road works	The value in US\$ of all contracts that MCAs have signed with contractors for construction of new or rehabilitated roads.	n.a	n.a	n.a	n.a	n.a	n.a
Value of contracted roads works disbursed (US\$Million)	Amount disbursed for all signed contracts for construction of new or rehabilitated roads.	n.a	9.97	68.8	155	202.5	202.5
Percent of contracted roads works disbursed	The aggregate amount disbursed divided by all signed contracts for construction of new or rehabilitated roads. (cumulative)	0	20	36	77	100	100
Value of signed contracts for feasibility, design, supervision and program management road contracts.	The value of all contracts that MCAs have signed with contractors to develop feasibility and/or design studies for systems of roads.	n.a	n.a	n.a	n.a	n.a	n.a
Value disbursed for road contracted studies and supervision (US\$Million)	Amount disbursed for all signed contracts to develop feasibility and/or design studies for systems of roads.	n.a	2.26	6.49	12.3	15.1	15.1
Percent disbursed for road contracted studies and supervision	The aggregate amount disbursed divided by all signed contracts to develop feasibility and/or design studies for systems of roads.	0	21	45	82	100	100

### 5.3. Disaggregating Data by Gender, Income and Age

The following indicators can be disaggregated by gender, age and/or income and will be reported as such:

Table 11. Indicators to be Disaggregated by Gender, Income and Age			
Indicators	Gender	Age	Income
<b>Human Development Project</b>			
New scholarships granted to students of technological education	X	X	X
New scholarships granted to students of middle technical education	X	X	X
Students of non-formal training	X	X	X
Time collecting water (hours per week per household)	X	X	X
Reduction in days of school or work missed as a result of water-borne diseases (days per year per person)	X	X	X
Reduction in the incidence of water-borne diseases (times per year per person)	X	X	X
Persons trained in hygiene and sanitary best practices	X	X	X
<b>Productive Development Project</b>			
Number of beneficiaries of technical assistance and training	X	X	X
<b>Connectivity Project</b>			
Beneficiaries of Resettlement Action Plans (RAPs)	X	X	X

#### 5.4. Data Quality Reviews

The objective of a Data Quality Review (DQR) is to verify the quality and consistency of performance data over time, across different implementing entities, reporting institutions and other data sources such the General Directorate for Statistics and Census (DIGESTYC). DQRs will analyze the accuracy, reliability, timeliness, and objectivity of performance data, and will identify cases in which the highest degree of data quality is not possible, given the realities of the data collection circumstances.

The particular objectives for the DQRs will be identification of the following parameters: i) what proportion of the data has quality problems (completeness, conformity, consistency, accuracy, duplication, and integrity); ii) which of the records in the dataset are of unacceptably low quality; and iii) what are the most predominant data quality problems within each field.

In addition to the external DQRs, the Monitoring and Evaluation Direction staff will regularly examine the quality of data across all Projects. FOMILENIO will also contract annual reviews of the productive development economic rate of return by an independent party.

#### 5.5. Progress Reports

Progress reporting refers to tracking the on-going “actual” progress of Project and Activity indicators against “targeted” progress. Progress reports serve as a vehicle by which the FOMILENIO Management informs MCC of implementation progress, impediments, lessons learned, best practices and on-going field revisions to Project work plans. Progress Reports will include data on the indicators described in the Monitoring Component and

analysis of those data. The analysis will compare the actual results to the indicator targets and determine the reason for deviations from projections. The Progress Reports referred to in this M&E Plan are part of a package of reports that FOMILENIO will be submitting to MCC on a regular basis. MCC's Reporting Guidelines describe the necessary content of these periodic reports and their due dates. The guidelines can be found on MCC's web site under Country Tools.

In addition to the reports required by MCC's Reporting Guidelines, FOMILENIO will submit a Compact Completion Report (CCR). The CCR shall be prepared taking into consideration:

- The normal progress report content;
- A concise description of the Program from proposal to completion;
- A preliminary assessment of the Program's outcomes and financial performance;
- Identification of beneficiaries including relevant characteristics such as gender, age, and income level;
- A preliminary assessment of the Program's sustainability of reaching future monitoring targets established as a measure of the project's sustainability;
- Lessons learned, including changes that might have been made in policies, procedures and practices related to the program;
- An assessment of significant environmental and social issues related to the Program;
- Recommendations regarding future Program implementation and operations for improving FOMILENIO and MCC operations, policies, procedures and practices related to the program;
- Any other requirements of MCC.

Reports on implementation progress should be posted on the FOMILENIO website.

## **5.6. Linking Disbursements to Performance**

The Disbursement Agreement includes a condition that there is satisfactory progress on the performance indicators in the M&E Plan for the Program, relevant Projects or Project Activities. Whether or not there has been satisfactory progress on the performance indicators will be analyzed in depth during the Mid-Term Review (see Section 6.2). Further funding of each Project Activity will be conditional on the outcome of the Mid-Term Review.

In addition, whenever feasible, FOMILENIO should include performance targets as deliverables against which payments will be made in implementation contracts.

## **6. Evaluation Component**

Evaluation is an essential element of the El Salvador Program. One of the key features of the MCC's approach to development assistance is its strong commitment to conducting rigorous impact evaluations of its programs, which employ, whenever possible, methodologies that determine whether results can be reliably attributed to MCC interventions. In addition, evaluation indicators can improve program management and provide lessons for future program implementation.

MCC will evaluate the impact of the Compact Program through three assessment exercises: i) ad hoc evaluations and special studies, executed over the life of the Compact, to address specific concerns raised during implementation and designed to increase the ability of FOMILENIO to interpret monitoring and evaluation findings; ii) a Mid-Term Evaluation, to provide impact findings permitting mid-course program corrections where necessary; and iii.) Final Impact Evaluation designed to identify the overall impacts of the program beyond measuring project and goal level indicator achievement to a broader evaluation of the economic impact and poverty reduction achieved by the program.

### **6.1. Special Studies**

The special studies will include:

1. Traffic survey (annual average daily traffic –origin and destination- and speed)
2. Study of road roughness and travel time
3. Other special studies to be defined

Originally it was planned that there would be a special study on the GDP of the Northern Zone; however it will not be done because it was agreed that the gathering of the data to report on this indicator would be too costly.

In addition, it was determined that there is no need of aerial photography of NTH and no need to conduct the originally planned land price study because information on land prices is being collected in the Connectivity baseline survey.

### **6.2. Mid-Term Review (MTR)**

The Mid Term Review was a self-evaluation done by FOMILENIO, from January to February 2010 (second quarter of third year of implementation). MTR main results were presented to FOMILENIO's Board of Directors by February 10. Four roundtables were established in order to review with the BOD the implementation strategies and constraints, projects achievements, success factors, implementing entities and contractors performance, performance indicator's targets adjustments and impact on ERR. On March 3, the agreements on these roundtables, corrective actions suggested by FOMILENIO administration, funds reallocation and consequently update M&E Plan were presented to BOD in order to request their approval, before it is sent to MCC for final approval.

The MTR objectives were: i) Analyze progress in the first 2.5 years of the Compact; ii) Identify reallocation of resources between projects and activities to achieve the highest impact given available information; and iii) Realign the M&E Plan end of Compact targets with existing work plans.

One of the primary purposes of analyzing the progress of Compact implementation was identify by the project managers the necessary mid-course corrections that may be needed. Given the innovative nature of the Program, it is important to track its performance and capture outcomes on an on-going basis in order to get feedback for program management, quickly benefit from implementation experience, and reinforce positive impacts and mitigate adverse ones through modifications to design and implementation if needed. The MTR recommended corrective actions to address the concerns raised about the program, particularly operation and management issues, and also it was proposed how to implement those corrective actions.

The MTR included the following types of assessments:

- Assessment, per activity, of progress and efficiency in delivery of inputs and outputs (updated economic rates of return);
- Assessment of initial program outcomes and benefits. Assessment of the impacts on the beneficiaries for each activity and the potential for sustaining the results achieved after the program ends;
- Assessment of the Program's organization and management, including FOMILENIO and its implementing entities, with respect to their size and composition, organizational structure, personnel management and policies, qualifications of local staff and consultants, and reporting capabilities;
- Analysis of factors and constraints that have influenced Program implementation, including technical, managerial, organizational, institutional and socio-economic policy issues, in addition to other external factors unforeseen during design;
- Identification of areas where Program design may require adjustments to increase performance and better reach target beneficiaries, including re-allocation of resources amongst Project Activities; and

Project Managers' role on the MTR was: i) review work plans, financial plans and determine adjustments over accomplishment of output indicator targets of each project; ii) deliver information to FOMILENIO Administration on the performance of each project activity in order to give a general evaluation; iii) deliver information to M&E Direction in order to update ERR of each activity.

M&E Direction's role on the MRT was: i) with the assistance from M&E-MCC to develop a format to present project and activity performance to date; ii) collaborate with project managers to fill out the information on MTR format; iii) updating the project/activities ERRs (an independent consultant was contracted to estimate PDP's ERR and the Ministry of Public Works' staff updated Connectivity's ERR); iv) update the M&E Plan and Indicator Tracking Table with new targets of all performance indicators; v) request to FOMILENIO's BOD approval of updated M&E Plan before sending it to MCC for Non-Objection Letter request.

### **6.3. Final Impact Evaluation**

A final impact evaluation is required to: accurately measure attributable program results from MCC's interventions; assure the validity of reported program results and outcomes; provide applicable lessons learned for similar future programs; and promote country accountability.

The final impact evaluation must address at least the following: i) why goals, objectives and targets were or were not achieved; ii) positive and negative unintended results of the program; iii) effectiveness of program activities and whether results can be attributed to MCC interventions; iv) lessons learned and best practices in project implementation; and v) comparative analysis of projected versus final economic rates of return on selected Projects.

MCC will contract independent evaluators to help design the methodology and data collection instruments for the impact evaluation. The evaluators will be engaged before and during implementation to ensure that the process of beneficiary selection and data collection efforts will proceed as planned. The evaluators will conduct periodic analysis of available data and the final evaluation. The design and planning work of the final impact evaluation will be completed before initial project activities are implemented. The agreed upon impact evaluation designs are attached to this M&E Plan as Annex 2.

## 7. Qualitative Information Gathering

To provide a more complete assessment of the true impacts of the Compact's projects, qualitative data on beneficiaries will be collected and analyzed. This will further complement the quantitative findings. Objective data collection efforts will include focus groups, individual and household interviews and surveys with a sample of project beneficiaries. These qualitative methods will be used to further verify or refute the findings from the quantitative data analysis and for possibly recommending further analysis that should be conducted.

## 8. Risks

The success of the Compact is fully related to achievements of each Project Activity, and projected outcomes are based on external risks, that are presented in Table 13.

**Table 12. Risks for Project Activities of the Compact**

<b>Compact Goals Program</b>
<ul style="list-style-type: none"> <li>▪ A reduction in the poverty rate of the Northern Zone will be less sensitive to economic growth if the residents of Northern Zone do not take advantage of employment and business opportunities generated by the Productive Development and Connectivity Projects.</li> <li>▪ An increase on input costs would difficult to get the level of achievement of the original targets of the Program.</li> <li>▪ The requirements of counterpart fund for Municipalities and Communities could delay the execution of the projects.</li> </ul>
<b>Human Development Project</b>
<b>Outcome 1. Improved Technical Skills of Salvadorans</b>
<ul style="list-style-type: none"> <li>▪ A potential mismatch between areas of demand in labor markets and career training provided by higher technical education, middle technical institutes and providers of informal training. This training may increase the human capital of residents of Northern Zone but will not ensure employment.</li> <li>▪ Lags in the execution of the formal technical education and non formal skills</li> </ul>



development sub-activities will not provide sufficient and timely workers demanded by Productive Development Project.

#### **Outcome 2. Improved the Access to Water and Basic Sanitation**

- Lack of education in appropriate health and sanitation practices will not reduce the incidence rate of waterborne diseases.
- Lack of technical assistance for community capacity building will not ensure maintenance and sustainability of water and sanitation system.
- Willingness to pay a tariff by the beneficiaries of water program will diminish if their incomes do not increase.
- Lack of human capital of beneficiaries from the water and sanitation projects and/or lack of employment opportunities will not permit a productive use of time gained by no longer having to fetch water.

#### **Outcome 3. Improved Access to Electricity**

- Lags on increase in electricity generation will reduce the quality of the service and quantitative of electricity consumed by rationing or higher prices.
- Low density of users connected to distribution lines will increase the cost of expansion of the electrical network.
- Poor maintenance will reduce the useful life of insulated solar systems and the electricity consumption of the beneficiaries of the rural electrification project.

#### **Outcome 4. Improved Access to Schools and Health Centers**

- If the community infrastructure is not a permanent solution in rainy and dry seasons, the beneficiaries will not reduce the time to access schools and health centers over the entire year.

#### **Productive Development Project**

#### **Outcome 5. Increased Private Investment in Productive Chains**

- Reduction of international prices will not promote private investment in the productive chains selected.
- Higher financial costs (fees, lending interest rates, guarantees, premium of agricultural insurance) will not switch the low productivity production of small and poor farmers to productive chains selected with competitive advantages.
- Higher transaction costs create barriers to private financial institutions in financing small and poor farmers of the Northern Zone.
- Residents of the Northern Zone could find employment in other zones of the country (like Port of La Unión) instead of working the land.
- Lags in the beginning of the Program will postpone the agriculture activities to the next rainy season.

#### **Connectivity Project**

#### **Outcome 6. Improved the Road Network**

- International traffic over the Northern Transnational Highway will not increase, because the roads that connect the borders of El Salvador with Guatemala and Honduras will not be built simultaneously.
- The paved rural roads will not increase the traffic between farms and rural villages or municipalities because the productive development program will not be implemented in parallel.
- The migration from the Northern Zone to the rest of the country will reduce the demand of passenger transport within Northern Zone.
- The high fuel prices will reduce the demand of transport at the national level.

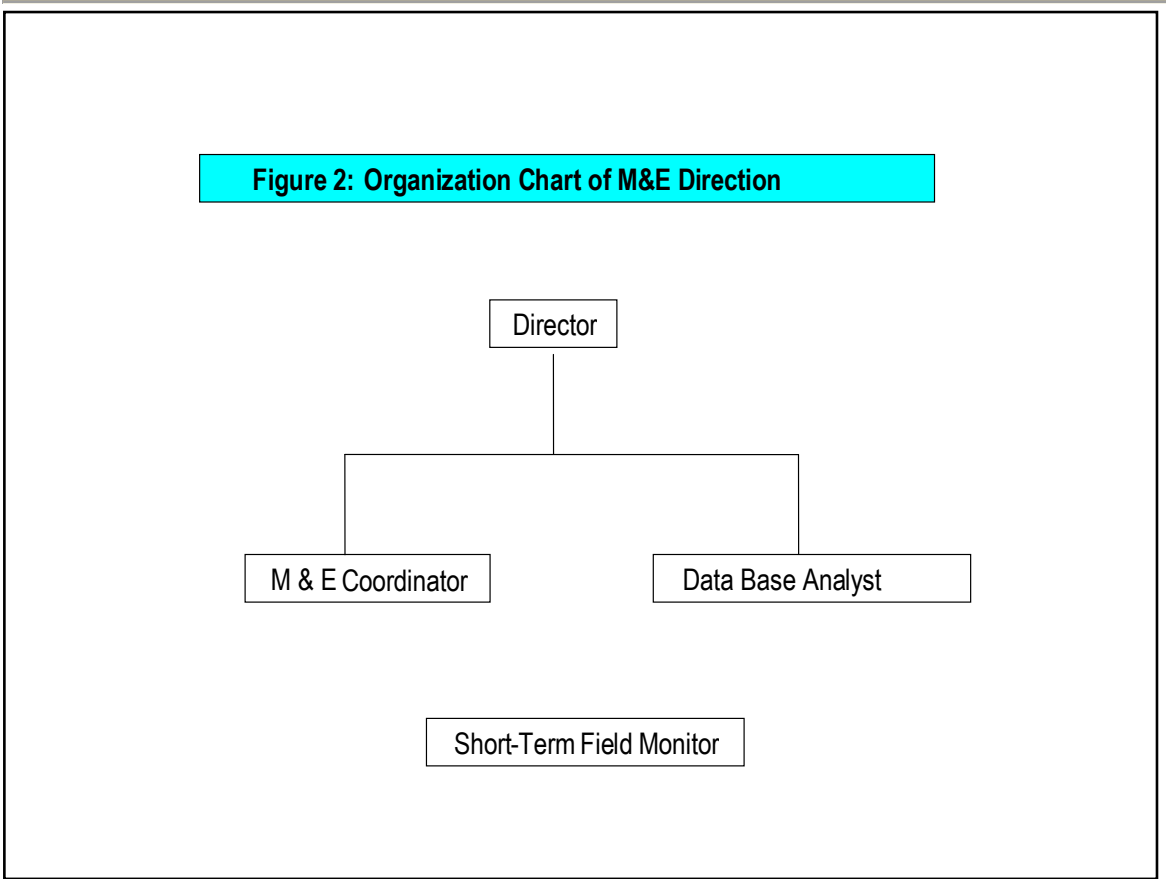
9. Implementation and Management of M&E

Before beginning the implementation of Projects or Project Activities, FOMILENIO will orient the staff of Implementing Entities on how performance will be measured, and will provide any necessary training to comply with the M&E Plan. MCC, through its M&E Division, will assist FOMILENIO as needed and requested.

9.1. Responsibilities

The Monitoring and Evaluation Direction (M&ED) within FOMILENIO will be responsible for overall monitoring and evaluation of the program. The M&ED will be primarily responsible for coordinating and ensuring quality in data gathering and reporting by the Implementing Entities (IEs). A second function will be the data management and overall program reporting. The M&ED will contract consultants to manage the Data Quality Reviews, Special Studies, and Ad-hoc Evaluations. MCC will directly contract the consultants for the Final Impact Evaluations and will provide input on both the selection of the FOMILENIO staff and potential consultants.

The M&ED will be headed by the M&E Director, who will coordinate the work of two other permanent staff: the Monitoring and Evaluation Coordinator (M&EC) and the Data Base Analyst (DBA) . The M&ED may also contract a Short-Term Field Monitor (STFM) to gather specific information. Figure 2 provides an organizational chart of the M&ED, while Figure 3 presents the relationships between FOMILENIO, MCC M&E and the various contractors and implementing agencies.

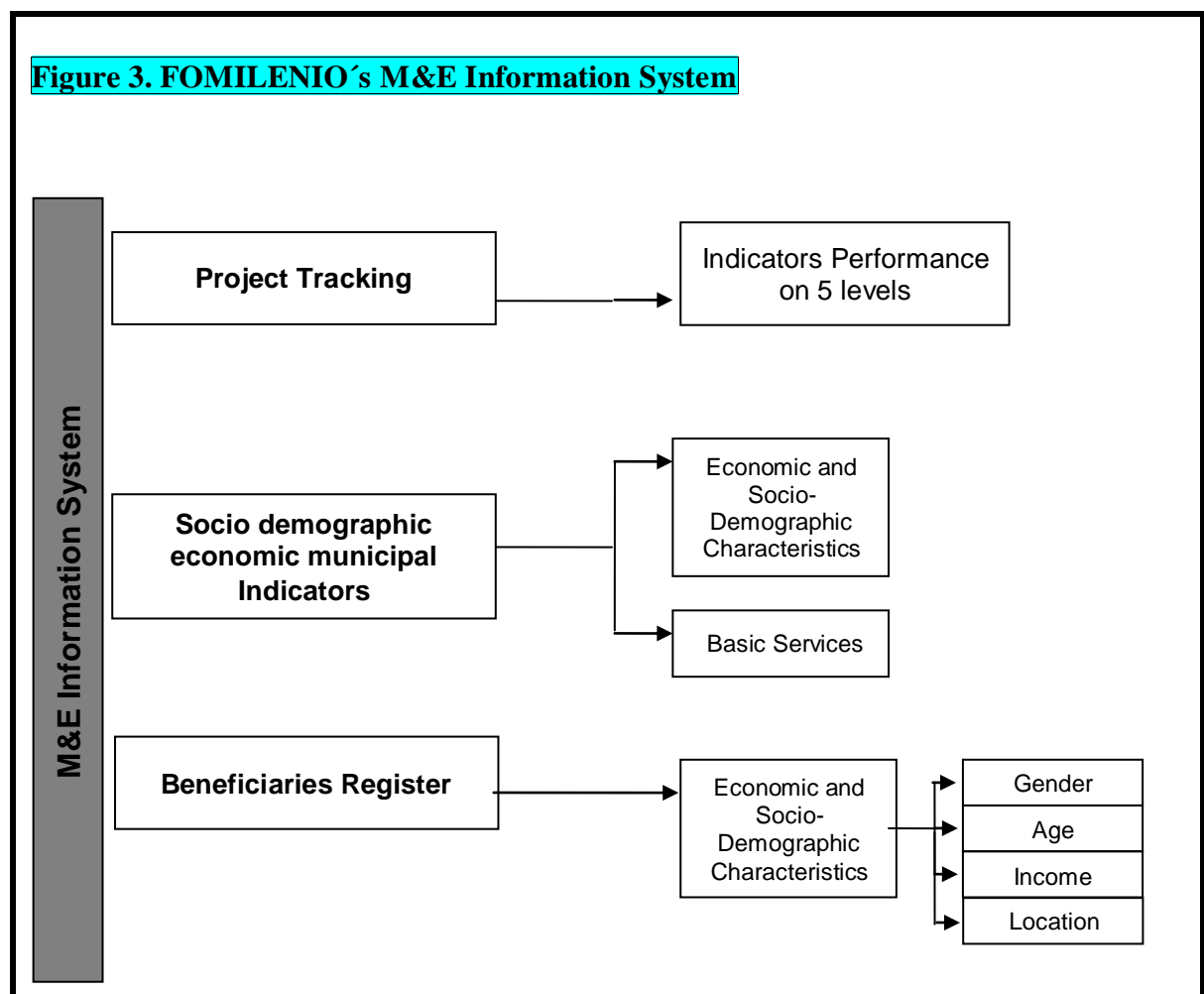


## 9.2. Review and Update of the M&E Plan

The M&E Plan will be revised as needed during the life of the Compact to adjust to changes in the Program's design and to incorporate lessons learned for improved performance monitoring and measurement. Any revision of the M&E Plan will follow MCC's Policy for Monitoring and Evaluation of Compact approved May 2009.

## 9.3. Information System for M&E

FOMILENIO established and maintains a M&E information system for continuously monitoring and reporting the progress of the Program and the impact of each of its Projects. That system covers three modules: i) Project Tracking on Performance Indicators; ii) Socio Demographic Economic Municipal Indicators; and iii) Beneficiaries Register (See Figure 3).

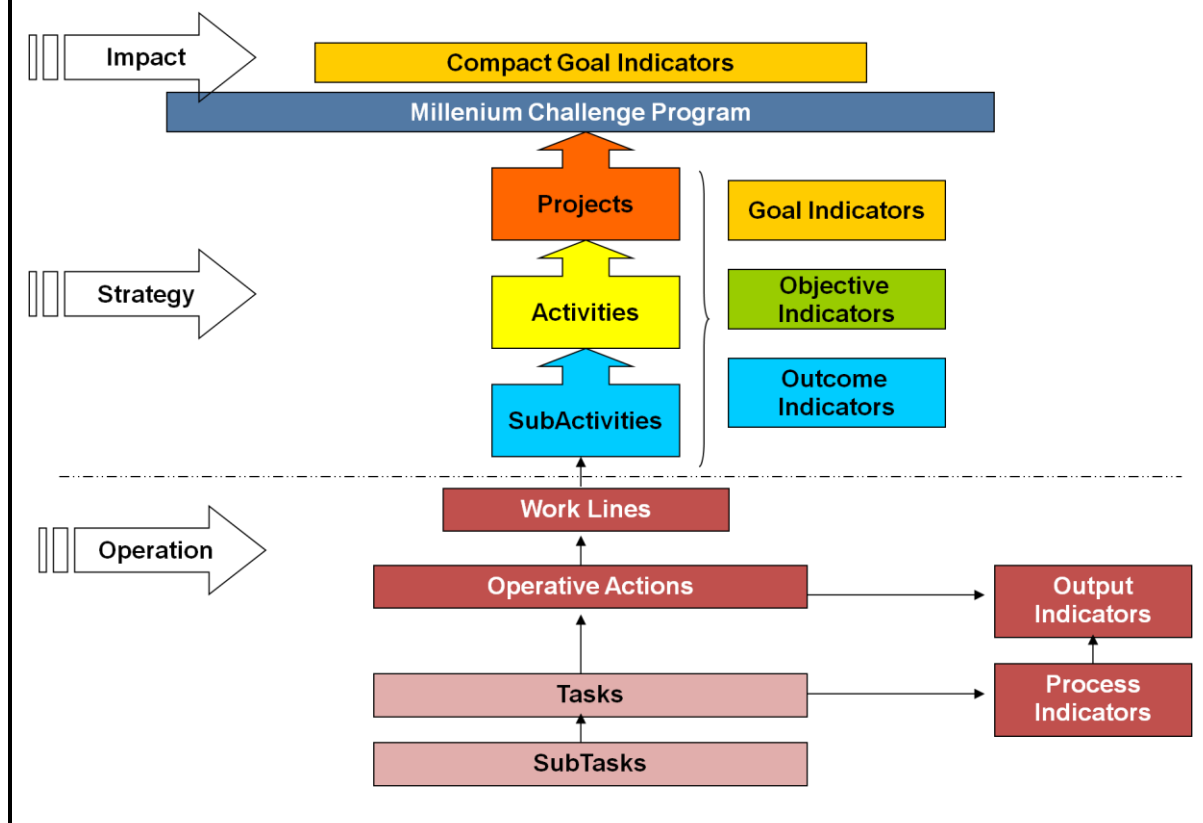


The module of Project Tracking includes information about: i) Impact Indicators (Goal, Outcome and Objective Indicators), ii) Output and Process Indicators,. (See figure 3-A)

With the restructuring of FOMILENIO in January 2009, it was determined that the Work Plan Project Tracking system would be operated by the Project Management Unit (PMU)

and not the M&E Direction. The contract deliverable tracking module that was originally included within the Project Tracking system would be operated by FOMILENIO's internal Procurement Agent.

**Figure 3-A. Module of Project Tracking of FOMILENIO'S M&E IS**



The module of Socio Demographic Economic Municipal Indicators will include information of each of the 94 municipalities of the Northern Zone from the Population and Housing Census, Economic and Agricultural census.

The module of Beneficiaries Registry (Beneficiaries Registration Information System – SIREB as acronyms in Spanish) will include identification of the beneficiaries of the Program, characterized by gender, income level, age and geographical location. Currently the modules inside SIREB filled with information are from Human Development Projects, which include beneficiaries of Education and Training Activity, and from Rural Electrification Sub-activity.

Information from PDP is going to be imported to SIREB from the project pilot and full implementation Systems (the last one under SP2 management).

The information on SIREB has been collected by the entities related directly with beneficiaries, as in the case of formal education and training of non-formal, as well as solar system installation. There is also incorporated into SIREB the information from people identified on community infrastructure projects.

Information from water and sanitation project communities is going to be exported from the several data bases that have collected this information.

In the case of the beneficiaries information of the 115kms of new electricity lines an external firm was contracted to collect it, the rest of information will be collected by the Electricity Distributors.

It is also considered to incorporate information from Right of Way beneficiaries, once the Connectivity Project Management (CPM) sends the data base.

#### **9.4. Coordination of M&E Data Gathering**

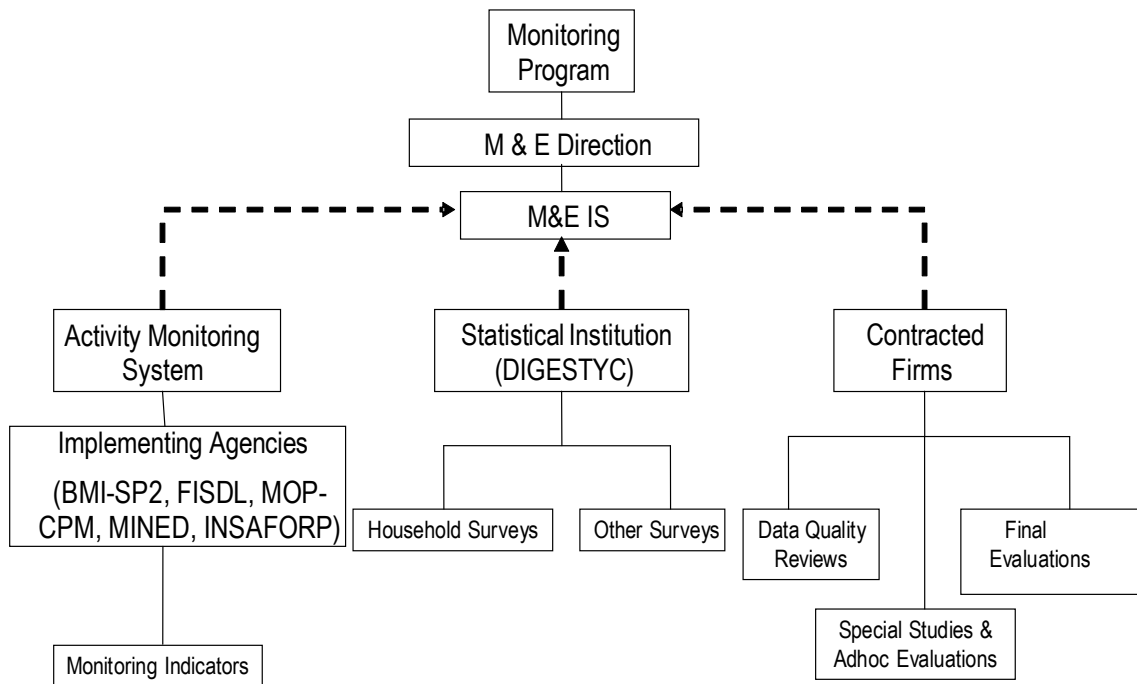
The gathering of all activity level performance indicators – process, output, and some outcome and objective indicators – will be carried out by the Implementing Entities. All data collection instruments and sample designs being funded through the Compact should be approved by MCC.

FOMILENIO will create an Implementing Entity Agreement with the General Directorate for Statistics and Census (DIGESTYC) to assist FOMILENIO with monitoring and evaluation of the Program. This document will detail specific responsibilities for gathering information from household beneficiaries of the Compact Program through the expanded Household Survey and additional project-specific surveys (if deemed necessary) for the Northern Zone.

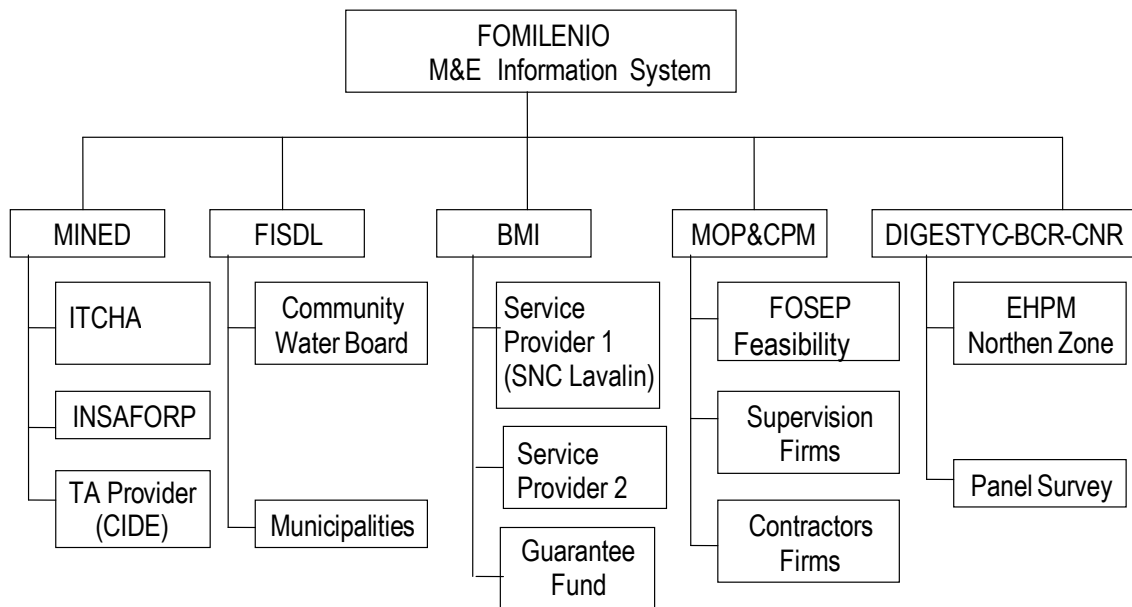
Data collection for the Compact projects will be conducted by multiple in-country Implementing Entities (See Figures 4 and 5), including:

1. Human Development Project: The Ministry of Education, INSAFORP, The Local Development Investment Fund (FISDL)-, through Supervision and Construction firms, the Ministry of Economy (MINEC), and Municipalities.
2. Productive Development Project: The Multi-Sectoral Investment Bank (BMI) through the Service Providers 1 and 2, Guarantee Fund and Financial Institutions.
3. Connectivity Project: The Ministry of Public Works (MOP) will be responsible for data collection through Pre-Investment Studies Fund (FOSEP), Supervision and Constructor Firms;
4. Monitoring and Evaluation: DIGESTYC will be responsible for the Household and some project-specific surveys;

**Figure 4: Relationship between Program M&E Direction and other Agencies**



**Figure 5: Relationship between FOMILENIO M&E IS and Implementing Agencies**



## 10. Budget

The original budget for M&E activities for the five-year term of the Compact was \$9.88 million. In addition approximately \$3 million from MCC funds will be used to collect information and complete the Final Impact Evaluations. The Government of El Salvador will contribute \$164,000 as counterpart funding from years one through six. In sum, the original total budget for M&E activities was estimated at \$13.04 million. The M&E budget does not include the staff of M&E Direction of FOMILENIO, whose salaries and field trips are included in the administrative budget of the Compact.

As a result of Mid Term Review, the savings on M&E budget amounted \$3.6 Million, that have been reallocated to support Human Development Project needs (employment plan and working capital of formal education and non-formal skills development beneficiaries, and to benefit poorest communities with internal electrical installation on year 5). Those savings came from a less expensive Monitoring Information System and Special Studies that did not take place. The Implementing Entity Agreement with DIGESTYC, allowed an efficient use of resources on Northern Zone Multipurpose Household and Impact Evaluation Surveys.

A summary of the new M&E Budget is shown in Table 13.

<b>Table 13. Compact M&amp;E Budget by Year (Millions of US\$)</b>		
<b>Description</b>	<b>Total</b>	<b>%</b>
1. Monitoring System	0.278	4
2. Quantitative Information Gathering	1.496	24
3. Qualitative Information Gathering	0.250	4
4. Data Quality Reviews	0.512	8
5. Special Studies	0.237	4
6. Report and Information Dissemination	0.060	1
7. Mid-Term and Final Evaluations	3.445	55
Total	6.278	100
%	100	

## Annex 1. Assumptions of the Original Compact Economic Analysis

The logical framework of El Salvador Compact is based on specific assumptions about the linkages between Project Activities and the goal of increasing economic growth and poverty reduction. The economic rates of return are based on these assumptions.

The success of the Program is fully related to achievements of each Project Activity, and projected outcomes are based on assumptions. These assumptions for each Project Activity are presented following.

<b>Compact Goals Program</b>
<ul style="list-style-type: none"> <li>▪ The increase in annual per capita income of residents in the Northern Zone in year 5 without Compact Program is 2.2% (compound 2.0% of economic growth less 1.7% of population growth); and with Compact Program is 19.1% (6.0% of connectivity project plus 13.1% on average of remaining projects). For year 10, the increase with and without Compact Program are 3.7% and 27.3% respectively.</li> <li>▪ The income elasticity used to calculate the poverty rate with and without Compact Program was 1.07, which corresponds to the national level GDP elasticity to poverty rate during 1991-2004.</li> <li>▪ The average annual per capita income of residents in the Northern Zone for baseline is US\$720 according with the Households Survey of 2004.</li> </ul>
<b>Human Development Project</b>
<b>Outcome 1. Improved Technical Skills of Salvadorans</b>
<ul style="list-style-type: none"> <li>▪ The promotion rate of the technological institute of Chalatenango is 78% and 72% for 20 middle technical schools.</li> <li>▪ 70% of graduates of Chalatenango MEGATEC (ITCHA 2005) and 50% of 20 middle technical schools (Household Survey 2004) obtain employment in the field of study one year after graduation.</li> <li>▪ The increase of yearly income for the graduates of Chalatenango MEGATEC is 37% compared to income of the graduates of 12<sup>th</sup> grade according to Mincer Equation; and 42% for the graduates of middle technical schools compared to income of graduates of 9<sup>th</sup> grade.</li> <li>▪ 8% of new enrolled to non-formal education drop out before finishing their studies.</li> <li>▪ 19.6% of graduates of non-formal education obtain a formal job and 8% will be self-employment after training.</li> <li>▪ The increase in yearly income for those who obtain a formal job after labor training is 225% and for self-employment is 150%</li> <li>▪ The monthly income before labor training is US\$ 60.0, for 10 to 12 years of study is US\$267.9, and for 13 or more years of study is US\$506.9.</li> </ul>
<b>Outcome 2. Improved Access to Water and Basic Sanitation</b>
<ul style="list-style-type: none"> <li>▪ The annual incidence rate of water-borne diseases is 148.6% of inhabitants without piped water at the national level. 38% of people that receive a medical consultation will go to the hospital for 4.6 days.</li> <li>▪ The cost of a consultation for morbidity is US\$ 6.14 for primary attention health centers and US\$15.11 for departmental hospitals.</li> <li>▪ 59.1% of the sick are of working age (15 to 64 years old) and 23.7% are of student age (5 to 14 years old). According to the Household Survey of 2004 their daily average income is US\$ 2.73.</li> <li>▪ 68.7% of households without piped water collect water from rivers and 31.3% buy</li> </ul>



it from a truck.

- Households spend 30 hours per week (equivalent to 13.6% of productive time according to the BASIS survey elaborated by FUSADES) carrying water from rivers or they spend US\$3.3 a month to buy 3.3 m<sup>3</sup> of water from trucks.
- The annual opportunity cost of time is US\$720.0, assuming a 44 hours work week.
- This project will provide residential water connections to 100% of households that buy water from trucks and 87.5% to households that carry water from rivers; the remaining 12.5% will obtain water from a public faucet.
- The average consumption of water paid for by a household will increase from 3 m<sup>3</sup> per month to 18 m<sup>3</sup> per month after the introduction of the residential connection.
- The price of water will decline from 3.3 US\$/m<sup>3</sup> before the project to 0.43 US\$/m<sup>3</sup> at 2005 constant prices.

### **Outcome 3. Improved Access to Electricity**

- Households without electricity spend money on candles, batteries for lamps, and kerosene to obtain alternative energy to light houses.
- This project will provide residential electricity connections to 46,336 households and insulated solar systems to 952 households.
- The average consumption of electricity by household will increase from 3.1 equivalent kwh per month to 10.9 after installation of insulated solar systems or 48 after the introduction of residential electricity connections.
- The price of electrical energy will decline from 2.57 US\$/equivalent kwh before the project to 0.69 US\$/kwh for insulated solar systems or 0.20 US\$/kwh for residential electricity connections, both at 2005 constant prices.

### **Outcome 4. Improved Access to Schools and Health Centers**

- The opportunity cost of time for beneficiaries of community infrastructure is US\$720 per year or US\$ 0.19 per hour.
- The project will reduce the time of access to schools and health centers by 18 minutes or 30%.

### **Productive Development Project**

#### **Outcome 5. Increased Private Investment in Productive Chains**

- Small and poor farmers of the Northern Zone are engaged in low-productivity and low-quality production.
- MCC funds will support pre-investment studies, technical assistance for the development of and implementation of business plans, partial investment capital (to finance physical infrastructure, equipment, seeds and plants, irrigation systems, etc.), guarantees, and agricultural insurance to increase the incomes of small and poor farmers of the Northern Zone.
- The project is intended to help the region jump-start investment, in productive chains with competitive advantage like forestry, fruits, vegetables, dairy products and meat, artisan products, and geo-tourism.
- The opportunity cost for small farmers of the Northern Zone is annual income of US\$720.
- The information sources of prices, yields, costs and technology of production of wood, fruits, vegetables, dairy products and meat are MAG, FRUTALES, CAMAGRO, FIAGRO, FINTRAC and BMI.
- The products and services provided by this project will use a demand driven approach.

<b>Connectivity Project</b>
<b>Outcome 6. Improved the Road Network</b>
<ul style="list-style-type: none"> <li>▪ The project will intervene 290 kilometers to secondary road standard on the Northern Transnational Highway, and 240 kilometers to modified tertiary road standard on Network of Connecting Roads.</li> <li>▪ The annual average daily traffic (AADT) will increase from 379 to 436 vehicles per day on the Northern Transnational Highway; and from 204 to 226 vehicles per day on Network of Connecting Roads.</li> <li>▪ The source of the 2005 baseline of AADT is the SIGESVIES (Sistema de Gestion Vial de El Salvador) of the Ministry of Public Works. The projected annual rate of growth is 1.69% for paved roads and 1.41% for non paved roads during 2006-2010; and 1.45% and 0.94% for the same roads during 2011-2029.</li> <li>▪ The program interventions will reduce the average international road roughness index (IRI) of the Northern Transnational Highway from 10.2 to 2.7; and the IRI of the Network of Connecting Road from 12.1 to 2.7.</li> </ul>

## Annex 2. Design of the Final Impact Evaluations

As described in Section 6.3, the rationale for impact evaluation is to establish clear attribution for the effect of the program activities compared to a counterfactual. Agreed upon approaches for the impact of each project or activity are described below.

### **Education and Training:**

*Scholarships* – The purpose of the evaluation will be to determine whether or not scholarship recipients are better off than they would have been without receiving the scholarships. The main outcomes are: enrollment, completion, employment and wages/income. If there is oversubscription for the scholarships, a random assignment will be used to select scholarship recipients from the pool of eligible applicants, after they meet the selection criteria. Given the oversubscription, a lottery would be the fairest way to distribute the scholarships. A higher probability of selection will be provided to certain groups. Those that don't receive the scholarships would be the control group for those that do receive the scholarships. Given the nature of the pilot scholarship program, it will not be included in the impact evaluation. The key data sources will be the application form and a follow-up survey of both the beneficiary and control groups.

*Middle Technical Schools* – The middle technical school activity is designed to increase the quality and capacity of approximately 20 secondary technical schools to absorb and train a greater numbers of students and to expand access to more at-risk youth and young adults. A comparison group will be developed by matching similar schools not included in the project to those that are included. Based on the results from administrative and survey data, the evaluators will measure the impact of school improvements on student enrollment, persistence, graduation, employment and wages.

Data for the impact evaluation will come from both administrative records kept by the Ministry of Education (MINED) and from an independent survey. MINED will provide annual data on enrollment and persistence. FOMILENIO has contracted an international consulting firm to collect the baseline data for variables that MINED does not track, such as graduation, employment, wages, and post-secondary education. The survey will sample approximately 600 students from beneficiary and non-beneficiary schools. These students will be interviewed one year after the final year of schooling to establish the baseline for labor outcomes such as employment and wages. The baseline is scheduled for Fall 2009 and a follow-up survey is scheduled for Fall 2013.

*MEGATEC* – A case study will be conducted of this activity since identifying a valid comparison group is quite difficult.

*Non-Formal Education* – This activity will not be subject to impact evaluation by MCC's contractor. However, FOMILENIO will track beneficiaries of this activity to see if are able to find jobs and increase their wages after completing the training.

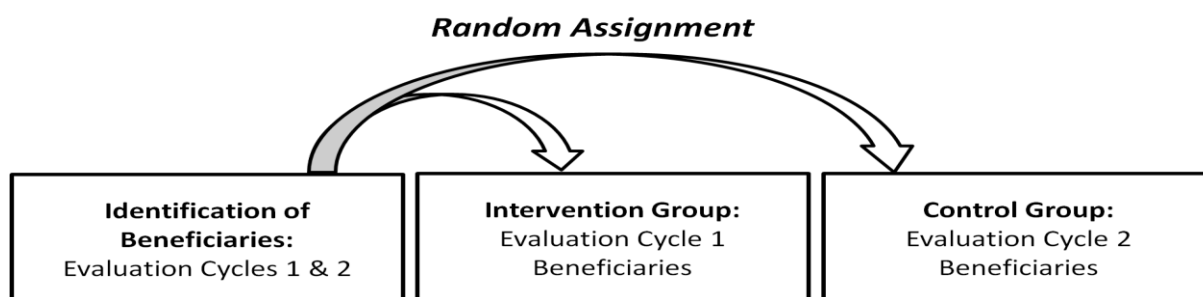
## **Productive Development:**

### *Activity 1: Production and Business Services (PBS)*

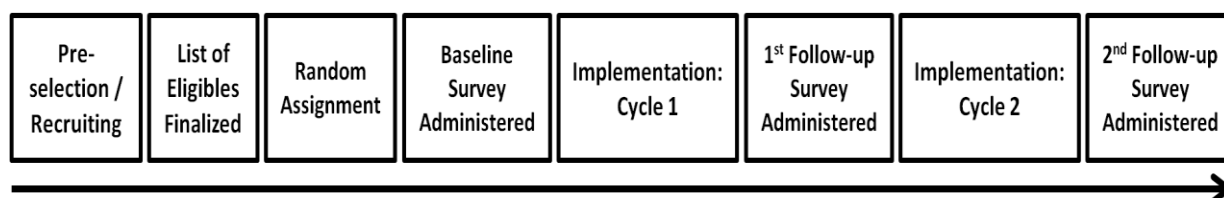
The purpose of the evaluation is to determine the impact of training, technical assistance and in-kind goods on producers in three value chains: dairy, handicrafts, and horticulture.<sup>27</sup> The main outcomes for all three value chains are: beneficiary income, employment generation and investment.

Although assessing the impact on beneficiaries' income and generated employment represents the main goal of the evaluation, the evaluation will also address impacts on intermediate outcomes, such as business practices and plans, technology adoption, product diversification, and value chain integration. Additionally, the evaluation is designed to examine the differential impact of offering PBS for two years instead of one year on employment and income, as well as on the intermediate outcomes listed above.

Because all of the PDP beneficiaries cannot be served in one year, but will be served over the course of four years, MCC, FOMILENIO and the PBS implementer agreed to a randomized rollout design. Under this design, all eligible beneficiaries identified by the PBS implementer will be offered the PBS intervention; however, the timing of service delivery will be randomized as shown in the diagram below. Groups of producers will be randomized since efficient implementation requires providing technical assistance at the group level.



The key data source will be the PDP surveys designed by Mathematica; these surveys are tailored to the characteristics of each of the three productive chains. There will be a baseline and two follow-up surveys for each chain. The agreed upon plan is diagrammed in the figure below:



<sup>27</sup> The other value chains including fruit, forestry, and tourism are not included in this evaluation because of the longer-term nature of their benefits. Furthermore, services to the forestry value chain may be discontinued.

### *Activity 2: Investment Support*

The evaluation design for Investment Support (FIDENORTE) is still under design since the activity is going through multiple changes. The most likely evaluation design is a before–after analysis that compares key indicators in the approved business plans before and after beneficiaries received a loan from FIDENORTE.<sup>28</sup>

### *Activity 3: Financial Services*

The evaluation of the third activity, Financial Services, will be combined to the extent possible with the evaluation of the first activity under the assumption that the financial services are just one more set of services eligible producers will be offered as part of the PDP intervention.

### **Community Development:**

*Water and Sanitation* – The water and sanitation services are designed to reduce poverty and increase household income by a) decreasing the cost and time to collect water, and b) reducing the incidence of water-borne diseases which reduces the costs of health services and the number of hours of work lost by water borne diseases. The impact evaluation of the activity will estimate the impact of water and sanitation improvements on beneficiary household income and other measures of welfare. Water and sanitation projects are being selected through a demand driven process. A call for proposals was issued in March 2008 and criteria were used to select the proposals to move on to the feasibility stage. Only a small number of proposals were rejected. The evaluation methodology relies on matching the selected project communities with similar communities in the Northern Zone using data from the population census conducted in 2007.

To estimate impact, the average change in income of those receiving the services will be compared to the average change in income of those who were not programmed to receive the services. The evaluation will use a household survey of 3,168 households as well as tests of the quality of the water at the household level and at the source point. The current data collection plan anticipates that each household will be surveyed three times, 1) baseline in April 2009, 2) follow up in April 2011 and 3) final in April 2012.

*Rural Electrification*- The impact evaluation seeks to determine the impact of electrification on the cost of energy, energy consumption, time allocation, and household income. Because the new electric lines will come from the existing power grid, an experimental design is not feasible for the overall impact evaluation. Therefore, the evaluators will use a non-experimental design taking advantage of the timeline of the rollout of the project combined with propensity score matching to identify treatment (households that receive the new electrical service) and control groups (households that do not receive new service). Using specialized household surveys for both the household head and his/her spouse with an intra-household time allocation module, the evaluators

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<sup>28</sup> MCC, FOMILENIO, and Mathematica are considering identifying a comparison group to strengthen the evaluation, although this is likely to be very difficult due to how FIDENORTE is providing services to eligible applicants and the low levels of demand.

will estimate the differences in energy consumption, household income, and time use between the treatment and control groups. A difference-in-difference estimation method will control for changes in non-observable variables, and instrumental variables estimation will control for any remaining potential sources of selection bias.

For a subsample of towns and households from the full sample being evaluated we will select an additional control and treatment group. The treatment group will be randomly assigned vouchers of varying amounts that would help cover costs for the installation of the internal connection that the households will need to pay in order to access the electricity once the cable reaches their household. Vouchers will be assigned randomly to between 10 and 50 percent of eligible survey respondents. The vouchers would not only encourage a sufficient level of demand for electricity access in the early stages of intervention, but would also provide for this subsample of households a basis for experimental evaluation of accessibility to electricity by serving as an instrumental variable for electricity access. The randomized selected control towns and households will serve as an appropriate control group given they will receive no vouchers.

The impact evaluation will be based on a survey of 1,532 total households in the departments of Chalatenango and San Miguel. These departments are proposed because, according to program plans, they include the largest numbers of cantons that will benefit from the electrification program. In addition, these districts include a number of cantons that will benefit from both the road improvement and the electrification projects, so data collection could be done at the same time for both evaluations.

The questionnaire includes two sections – one that will be answered by a male in the household (including household income and agricultural productivity) and will be interviewed by a male survey taker, and the second which will be answered by a female in the household (including household demographics and expenses) and interviewed by a female survey taker. The separate interviews are intended to get more accurate data on topics that are more familiar to certain people in the household. The current data collection plan anticipates that each household will be surveyed three times, 1) baseline in November 2008, 2) follow up in November 2010, and 3) final in November 2011. This may change however if there are delays in the construction schedule.

*Community Infrastructure* – The evaluation of this activity is not included in the scope of work of the MCC-contracted evaluators. However, depending on which projects are selected for investment through this activity, some of the data collection for other evaluations may be used to evaluate this activity.

### **Connectivity:**

The impact evaluation will combine propensity score matching (PSM), difference in differences (as it allows controlling for the change in non-observable variables), instrumental variables and regression discontinuity (to control for the remaining potential sources of selection bias) to measure the change in household incomes within the “area of influence” defined as the area within 30 minutes of access through existing means of communication to the NTH. Additional outcomes that will be evaluated include the reduction of transportation costs and transportation time, an expected increase in land values, access to public services and their impacts on health and education outcomes,

changes in labor allocation between farm and non-farm activities, and differentiated gender effects of road improvements.

The evaluation will use household surveys and community surveys. The household survey will interview approximately 5,388 households that are located within 30 minutes of access to the NTH. The questionnaire includes two sections – one that will be answered by a male in the household (including household income and agricultural productivity) and will be interviewed by a male survey taker, and the second which will be answered by a female in the household (including household demographics and expenses) and interviewed by a female survey taker. The separate interviews are intended to get more accurate data on topics that are more familiar to certain people in the household. The community survey includes questions on community infrastructure and access key markets and social services. The current data collection plan anticipates that each household will be surveyed three times, 1) baseline in November 2008, 2) follow up in November 2010, and 3) final in November 2011. This may change however if there are delays in the construction schedule.

### Annex 3. Indicator Tables

Overall Goal/Impact Indicators for the Program						
Indicators	Definition of Indicators	Measurement Units	Source of Data	Method of Data Collection	Frequency and periods	Reporting Agency to FOMILENIO
<b>Poverty rate in the Northern Zone</b>	Percentage of residents of the Northern Zone whose income falls below the poverty line as calculated by the General Directorate for Statistics and Census ("DIGESTYC")	%	DIGESTYC	Household survey EHPM NZ	Annual	DIGESTYC
<b>Annual per capita income of Program beneficiaries in the Northern Zone</b>	Average annual per capita income in the Northern Zone as calculated by DIGESTYC.	US \$	DIGESTYC	Household survey EHPM NZ	Annual	DIGESTYC



Human Development Project: Education and Training						
Indicators	Definition of Indicators	Measurement Units	Source of Data	Method of Data Collection	Frequency and periods	Reporting Agency to FOMILENIO
<b>Goal Indicators</b>						
Incremental income of graduates of the Chalatenango Center	Percentage of increase in yearly income earned by graduates of the Chalatenango Center (technological education institutes) compared to graduates of 12 <sup>th</sup> grade	%	MCC Evaluator	Case study and existing surveys	2013	MCC Evaluator
Incremental income of graduates of middle technical schools	Percentage of increase in yearly income earned by graduates of middle technical schools compared to graduates of 9 <sup>th</sup> grade	%	Independent Firm	Education tracer study	2013	MCC Evaluator
Incremental income of non-formal trained beneficiaries	Percentage of increase in yearly income earned by non-formal trained beneficiaries compared to previous income.	%	Independent Firm	Non-formal training tracer study	Annual	CIDE
<b>Objective Indicators</b>						
Employment rate of graduates of the Chalatenango Center	Percentage of graduates of the Chalatenango Center (functioning as a MEGATEC institute) employed one year after graduation	%	Independent firm / Chalatenango Center	Education Tracer Study / School Administrative Records	2013	MCC Evaluator
Employment rate of graduates of middle technical schools	Percentage of graduates of middle technical schools remodeled by the Project Activity, employed one year after graduation	%	Independent firm	Education Tracer Study	2013	MCC Evaluator

Human Development Project: Education and Training						
Indicators	Definition of Indicators	Measurement Units	Source of Data	Method of Data Collection	Frequency and periods	Reporting Agency to FOMILENIO
Employment rate of non-formal trained beneficiaries.	Percentage of non-formal trained beneficiaries employed one year after the training.	%	Independent Firm	Non-formal training tracer study	Annual	CIDE
Employed graduates of MCC-supported training programs	Number of MCC-supported training program graduates employed one year after graduation. This indicator is aimed to employed graduates from non-formal training.	Number of employed graduates	Independent Firm	Non-formal training tracer study	Annual	CIDE
<b>Outcome Indicators</b>						
Graduation rates of the Chalatenango Center	Percentage of graduates of the Chalatenango Center in relation to total enrollment in the first year	%	Chalatenango Center	School Administrative Records	Annual	MINED
Graduation rates of middle technical schools	Percentage of graduates of the middle technical schools in relation to total enrollment in the first year	%	Middle Technical Schools	School Administrative Records	Annual	MINED
Completion rate of non-formal trained beneficiaries	Percentage of non-formal trained beneficiaries that completed the training compared to total enrollment of non-formal training beneficiaries.	%	Service Providers/ INSAFORP	Non-formal tracer Study	Annual	Supervising Team- INSAFORP

Human Development Project: Education and Training						
Indicators	Definition of Indicators	Measurement Units	Source of Data	Method of Data Collection	Frequency and periods	Reporting Agency to FOMILENIO
Tertiary and secondary school graduates in MCC-supported educational facilities.	The number of students graduating from the highest grade (year) for that educational level in MCC-supported educational facilities. It includes graduated students from Chalatenango Center and Middle Technical Schools (cumulative).	Number of students	Educational facilities	Administrative Records	Annually	MINED
Students of the Chalatenango Center	Total number of students enrolled in 2012 in the Chalatenango Center (functioning as a MEGATEC institute) (not cumulative)	number of students	Chalatenango Center	School Administrative Records	Annual	MINED
Students of middle technical schools	Total number of students enrolled in 2012 in the middle technical schools included in the Project Activity (not cumulative)	number of students	Middle Technical Schools	School Administrative Records	Annual	MINED
<b>Output Indicators</b>						
Technologic institutes remodeled and equipped	Chalatenango technological institute remodeled and equipped by FOMILENIO Program	number of institutes	Contractor	Administrative Data	Annual	MINED
Middle technical schools remodeled and equipped	Number of middle technical schools remodeled by FOMILENIO Program	number of schools	Contractor	Administrative Data	Quarterly	MINED
Educational facilities constructed / rehabilitated and / or equipped through MCC-supported activities	Number of unique educational facilities constructed, rehabilitated, and / or equipped according to standards stipulated	Number of facilities	Contractor	Administrative Data	Quarterly	MINED

Human Development Project: Education and Training						
Indicators	Definition of Indicators	Measurement Units	Source of Data	Method of Data Collection	Frequency and periods	Reporting Agency to FOMILENIO
	in MCA contracts signed with implementers. This indicator combines the two indicators “Technologic institutes remodeled and equipped” and “Middle technical schools remodeled and equipped”					
Number of instructors trained or certified through MCC-supported activities	Total number of unique classroom instructors who complete MCC-supported training and/or certification requirements focused on instructional quality as defined by the Compact training activity (e.g. training in improved pedagogical methods, delivering revised curricula, etc.)	number of instructors	Chalatenango Center	School Administrative Records	Quarterly	MINED
New scholarships granted to students of technological education	Number of unique students that receive scholarships of first/second/third year of technological education institutes	Students with scholarships	Chalatenango Center	School Administrative Records	Quarterly	MINED
New scholarships granted to students of middle technical education	Number of unique students that receive scholarships of first/second/third year of middle technical schools	Number of scholarships	Middle Technical school	School Administrative Records	Quarterly	MINED
Students of non-formal training	Number of unique students who participate in non-formal training as part of the Project	number of students	Training Service Provider	Service Provider Administrative	Quarterly	INSAFORP

Human Development Project: Education and Training						
Indicators	Definition of Indicators	Measurement Units	Source of Data	Method of Data Collection	Frequency and periods	Reporting Agency to FOMILENIO
	Activity(cumulative)			Records		
Number of students participating in MCC-supported education activities	Cumulative total number of unique students enrolled or participating in MCC-supported educational programs. This indicator includes the students enrolled in middle technical schools, MEGATEC, non-formal training, and scholarship recipients enrolled in schools different from those listed above”	Number of students	Institute, schools, training service providers, CIDE.	Administrative Records	Quarterly	MINED, INSAFORP, CIDE
Additional female students enrolled in MCC-supported educational facilities – technological education.	Additional unique female students enrolled in MCC-supported technological educational facilities. This indicator includes only female students who have received scholarships (cumulative)	Female students	Educational facilities	Administrative Records	Annually	MINED
Additional female students enrolled in MCC-supported educational facilities- middle technical schools.	Additional unique female students enrolled in MCC-supported middle technical educational facilities. This indicator includes only female students who have received scholarships (cumulative)	Female students	Educational facilities	Administrative Records	Annually	MINED

Human Development Project: Education and Training						
Indicators	Definition of Indicators	Measurement Units	Source of Data	Method of Data Collection	Frequency and periods	Reporting Agency to FOMILENIO
Process Indicators						
Scholarship Program Administrator designated.	Date contract or grant agreement signed with the entity or entities competitively selected to administer scholarship program for academic year 2009 and beyond.	Date	CIDE	Legal Documents	Once	MINED
Diagnostic-Based Implementation Plan approved by MCC.	Date compact-referenced plan based on the results of the diagnostic is approved. Includes identification of 20 middle technical schools to be strengthened and technical careers. (CIDE Deliverables 4 and 17)	Date	CIDE	Reports	Once	MINED
Value of signed contracts for MCC-supported educational facility construction/rehabilitation and /or equipping	Value of signed contracts, in US Dollars, for educational facility construction or rehabilitation and/or equipping (e.g. information technology, desks and chairs, electricity and lighting, water systems, girls latrines, etc.).	US \$ Million Dollar	FOMILENIO's Contract Agent	Contractual Records	Quarterly	FOMILENIO's Fiscal Agent
Value of contracted construction / rehabilitation / MCC-supported educational equipping works disbursed.	The aggregate amount disbursed for all signed contracts for education facility works and/or equipping. In US Million	US \$ Million Dollar	FOMILENIO's Contract Agent	Contractual Records	Quarterly	FOMILENIO's Fiscal Agent

Human Development Project: Education and Training						
Indicators	Definition of Indicators	Measurement Units	Source of Data	Method of Data Collection	Frequency and periods	Reporting Agency to FOMILENIO
	Dollars.					
Percent of contracted construction / rehabilitation / MCC-supported educational equipping works disbursed.	The aggregate amount disbursed divided by all signed contracts for education facility works and/or equipping.	Percentage	FOMILENIO's Fiscal Agent	Financial records	Quarterly	FOMILENIO's Fiscal Agent

Human Development Project: Community Development						
Indicators	Definition of Indicators	Measurement Units	Source of Data	Method of Data Collection	Frequency and periods	Reporting Agency to FOMILENIO
<b>Goal Indicators</b>						
Increase in income of water and sanitation beneficiaries	Percentage increase in income of households receiving water and sanitation investments	%	DIGESTYC	Panel Survey	2012	DIGESTYC
Increase in income of electrification beneficiaries	Percentage increase in income of households who received connections to the electrical grid	%	DIGESTYC	Panel Survey	2012	DIGESTYC
Increase in income of community infrastructure beneficiaries	Increase in income of households located close to community infrastructure	%	DIGESTYC	Panel Survey	2012	DIGESTYC
<b>Objective Indicators</b>						
Cost of water (US\$ per m <sub>3</sub> )	Average Price of water per cubic meter for beneficiaries that bought water before the Project Activity	US\$ per Cubic meter	DIGESTYC	Panel survey	2012	DIGESTYC
Domestic water consumption (m <sub>3</sub> )	Average Number of cubic meters of water per month paid for by project beneficiaries	Cubic meter	DIGESTYC	Panel survey	2012	DIGESTYC



### Human Development Project: Community Development

Indicators	Definition of Indicators	Measurement Units	Source of Data	Method of Data Collection	Frequency and periods	Reporting Agency to FOMILENIO
Time collecting water (hours per week per household)	Hours per week spent collecting water by Project Activity household beneficiaries	Hours per week per household	DIGESTYC	Panel survey	2012	DIGESTYC
Incidence of water-borne diseases (times per year per person)	Number of times a year beneficiaries are sick with intestinal parasitism, diarrhea and infectious gastroenteritis	Times per year per person	DIGESTYC	Panel survey	2012	DIGESTYC
Reduction in days of school or work missed as a result of water-borne diseases (days per year per person)	Reduction of the number of days of school or work missed per year as a result of intestinal parasitism, diarrhea or infectious gastroenteritis per beneficiaries	Days per year per person	DIGESTYC	Panel survey	2012	DIGESTYC
Cost of electricity (per kilowatt-hour)	Price of electricity per kilowatt-hour for beneficiaries	US \$ per kwh	DIGESTYC	Panel Survey	2012	DIGESTYC
Electricity consumption (kilowatt-hours per month)	Number of kilowatt-hours per month consumed on average by households connected to the electricity network by the Program	Kwh per month	DIGESTYC	Panel Survey	2012	DIGESTYC
Time saved accessing to education and health centers (minutes per working day per beneficiary)	Reduction in minutes per working day dedicated to accessing education and health centers by beneficiaries of Community Infrastructure	Minutes per working day per beneficiary	DIGESTYC	EHPM (Section 2: Education, Q212 given 210.a.1 and Section 6:Health, Q606 given 604.02) Data panel survey	2012	DIGESTYC

Human Development Project: Community Development						
Indicators	Definition of Indicators	Measurement Units	Source of Data	Method of Data Collection	Frequency and periods	Reporting Agency to FOMILENIO
<b>Outcome Indicators</b>						
Percentage of households with water in the Northern Zone (%)	Percentage of households with access to water (within the household, outside the household, from a neighbor, from a public faucet, or from a well) in Northern Zone per calendar year.	%	DIGESTYC / FISDL	EHPM (Section 3: Housing, Q. 313 - 01,02,03,04,05) & Administrative Data	Annual	DIGESTYC / FISDL
Percentage of households with basic sanitation in the Northern Zone (%)	Percentage of households with access to either private sewage drainage systems, latrines or septic tanks in the Northern Zone per calendar year.	%	DIGESTYC / FISDL	EHPM (Section 3: Housing, Q. 317 - 1,2,3) & Administrative Data	Annual	DIGESTYC/ FISDL
Percentage of households with electricity in the Northern Zone (%)	Percentage of households with a private electricity connection in the Northern Zone per calendar year.	%	DIGESTYC / FISDL/ MINEC	EHPM (Section 3: Housing, Q. 312) & Administrative Data	Annual	DIGESTYC/ FISDL
<b>Outcome Indicators</b>						
Population benefiting from community infrastructure (cumulative people)	Number of beneficiaries from the community infrastructure projects (feeder roads, small bridges, drainage system, etc)	#	Construction Firms	Administrative data	Annual	FISDL
<b>Output Indicators</b>						

### Human Development Project: Community Development

Indicators	Definition of Indicators	Measurement Units	Source of Data	Method of Data Collection	Frequency and periods	Reporting Agency to FOMILENIO
Number of households with access to improved water supply	Number of households whose main source of drinking water is a private piped connection (into dwelling or yard), public tap/standpipe, tube-well / borehole, protected dug well, protected spring, or rainwater as a result of MCC investment(s).	#	Construction Firms	Administrative data	Quarterly	FISDL
Number of households with access to improved sanitation.	Number of households who get access to and use an improved sanitation facility such as flush toilet to a piped sewer system, flush toilet to a septic tank, flush or pour flush toilet to a pit, composting toilet, ventilated improved pit latrine, or pit latrine with slab and cover as a result of MCC investment(s).	#	Construction Firms	Administrative data	Quarterly	FISDL
Persons trained in hygiene and sanitary best practices	Number of persons who have completed training and have an understanding of hygiene and sanitary practices that block the fecal-oral transmission route.	#	Construction Firms	Administrative data	Quarterly	FISDL
Households benefited with the connection to the electricity network	Number of households benefited with the connection to the existing and extended electricity network by FOMILENIO	#	Electricity Distribution Company/ Contractor	Administrative data	Quarterly	Distribution Company

### Human Development Project: Community Development

Indicators	Definition of Indicators	Measurement Units	Source of Data	Method of Data Collection	Frequency and periods	Reporting Agency to FOMILENIO
Households benefited with the connection to the electricity network - GOES	Number of households benefited with the connection to the existing and extended electricity network achieved by GOES.	#	Government entities related	Administrative data	Annually	Distribution Company
Households benefited with the Installation of insulated solar systems	Number of households benefited with isolated solar systems	#	Contractor	Administrative data	Quarterly	Contractor
<b>Process Indicators</b>						
Potable water and basic sanitation systems with construction contracts signed.	Number of water systems that have signed a construction, training and technical assistance contract.	#	Procurement Agent	Administrative records	Quarterly	Procurement Agent
Value of Water & Sanitation Construction Contracts Signed	The value of all contracts signed with contractors for water and sanitation works.	US \$ Million Dollar	FOMILENIO's Contract Agent	Contractual Records	Quarterly	FOMILENIO's Fiscal Agent
Value of Contracted Water & Sanitation Works Disbursed	Amount disbursed for all signed contracts for water and sanitation works.	US \$ Million Dollar	FOMILENIO's Contract Agent	Contractual Records	Quarterly	FOMILENIO's Fiscal Agent
Percent of Contracted Water & Sanitation Works Disbursed	The aggregate amount disbursed divided by all signed contracts for water and sanitation works.	Percentage	FOMILENIO's Fiscal Agent	Financial records	Quarterly	FOMILENIO's Fiscal Agent
Value of Water & Sanitation Feasibility and/or Detailed Design Contracts Signed	Value of all signed feasibility, design, and environmental contracts, including resettlement action plans, for water and	US \$ Million Dollar	FOMILENIO's Contract Agent	Contractual Records	Quarterly	FOMILENIO's Fiscal Agent

## Human Development Project: Community Development

Indicators	Definition of Indicators	Measurement Units	Source of Data	Method of Data Collection	Frequency and periods	Reporting Agency to FOMILENIO
	sanitation investments.					
Value of Contracted Water & Sanitation Feasibility and/or Detailed Design Disbursed	Amount disbursed for all signed feasibility, design, and environmental contracts, including resettlement action plans, for water and sanitation investments	US \$ Million Dollar	FOMILENIO's Contract Agent	Contractual Records	Quarterly	FOMILENIO's Fiscal Agent
Percent of Contracted Water & Sanitation Feasibility and/or Detailed Design Disbursed	Amount disbursed of all signed feasibility, design, and environmental contracts, including resettlement action plans, for water and sanitation investments divided by total value of all contracts awarded	Percentage	FOMILENIO's Fiscal Agent	Financial records	Quarterly	FOMILENIO's Fiscal Agent
Community Infrastructure works with construction contracts signed.	Number of Infrastructure Community works that have a signed construction contract.	#	Procurement Agent	Administrative Records	Quarterly	Procurement Agent
Kilometers of New lines of Electrical Distribution construction contracts signed.	Number of kilometers of new electrical distribution lines that have a construction contract signed.	#	Procurement Agent	Administrative records	Quarterly	Procurement Agent
Solar PV systems installation and basic training contracts signed.	Number of Solar PV systems that have a signed installation and basic training contract.	#	Procurement Agent	Administrative records	Quarterly	Procurement Agent

Productive Development Project						
Indicators	Definition of Indicators	Measurement Units	Source of Data	Method of Data Collection	Frequency and periods	Reporting Agency to FOMILENIO
<b>Goal Indicators</b>						
Increase in income of Productive Development beneficiaries	Average percentage increase in annual income of project beneficiaries	%	DIGESTYC <sup>29</sup>	Panel Survey	2011 and 2012	DIGESTYC
<b>Objective Indicators</b>						
Economic Rate of Return (ERR)	The definition and methodology for calculating the ERR will be in the PD Operations Manual and will be consistent with MCC's Guidelines for Economic Analysis and will be measured from Year 2 to Year 5	%	Service Provider 1, Service Provider 2 and BMI	This will be defined in the PD Operations Manual and will be consistent with MCC's Guidelines for Economic Analysis	Annual	FOMILENIO
Employment created (number of jobs)	Number of full-time equivalent jobs created as a result of the Project	Number of jobs	Service Provider 1 and 2 and BMI	Administrative data	Annual	SP1, SP2 and BMI

<sup>29</sup> The data source for the increase in income indicator that was included in SP2's contract as a deliverable will be SP2 and not DIGESTYC

Productive Development Project						
Indicators	Definition of Indicators	Measurement Units	Source of Data	Method of Data Collection	Frequency and periods	Reporting Agency to FOMILENIO
Outcome Indicators						
Investment in productive chains by selected beneficiaries	Spending of MCC funds and counterpart contributions on inputs, equipment and infrastructure as laid out in business plans over the five years of the Compact	US\$ Million	Service Provider 1 and 2 and BMI	Administrative data	Annual	SP1, SP2 and BMI
Number of farmers that have applied improved techniques	Total number of farmers or rural entrepreneurs that are applying new production or managerial techniques introduced by the Production and Business Support Activity (pilots and normal project), such as input use, production techniques, irrigation, post harvest treatment, and farm management techniques.	Number	SP2	Administrative Data	Quarterly	SP2
Number of enterprises that have applied improved techniques	Total number of farmers' associations, post-harvest or processing enterprises, or other rural enterprises that are applying managerial or processing techniques introduced by the Production and Business Services Activity (pilots and normal project).	Number	SP2 from Administrator Beneficiaries register	Administrative Data	Quarterly	SP2

Output Indicators						
Number of beneficiaries of technical assistance and training	Number of beneficiaries who receive at least one type of assistance from the Production and Business Support Activity (pilots and normal project).	Number	SP1 and - SP2- from Administrators Beneficiaries register	Administrative Data	Quarterly	SP1 and SP2
Number of farmers trained	Total number of producers (farmers, ranchers, fishermen, and other primary sector producers) or rural entrepreneurs who receive at least one type of assistance from the Production and Business Support Activity (pilots and normal project)	Number	SP1 and SP2 from Administrators Beneficiaries register	Administrative Data	Quarterly	SP1 and SP2
Number of beneficiaries of technical assistance and training – Non-agriculture	Number of beneficiaries who receive at least one type of assistance from the Production and Business Support Activity (pilots and normal project). Non-agriculture includes sectors such as tourism and handicrafts.	Number	SP1 and SP2 - from Administrators Beneficiaries register	Administrative Data	Quarterly	SP1 and SP2
Number of beneficiaries of technical assistance and training – Agribusinesses	Number of agribusinesses who receive at least one type of assistance from the Production and Business Support Activity (pilots and normal project). Agribusinesses must be involved in value-added activities, such as the processing of tomatoes or milk.	Number	SP1 and SP2 - from Administrators Beneficiaries register	Administrative Data	Quarterly	SP1 and SP2
Number of enterprises assisted (	Total number of farmers' associations, post-harvest or processing enterprises, water management entities, or other rural enterprises receiving technical or financial assistance. This indicator combines the indicators "Beneficiaries of technical assistance and training – Agribusinesses" and "Number of loans granted by the Investment Support Fund (FIDENORTE) – Agribusiness."	Number	SP2 - from Administrators Beneficiaries register	Administrative Data	Quarterly	SP2
Number of hectares under production with support from PDP	Number of hectares under production with support from PDP including technical assistance and material support (pilots and normal project).	Hectares	SP1 and SP2	Administrative Data	Quarterly	SP1 and SP2



Output Indicators						
Amount of Investment Support fund (FIDENORTE) approved.	Value of the FIDENORTE-funded part of the investment plans approved.	Millions US \$	BMI	Administrative Data	Quarterly	BMI
Amount of Investment Support fund (FIDENORTE) approved – Agriculture	Value of the FIDENORTE-funded part of the investment plans approved for activities in agriculture (Millions of US\$).	Millions US \$	BMI	Administrative Data	Quarterly	BMI
Amount of Investment Support fund (FIDENORTE) approved – Non-agriculture	Value of the FIDENORTE-funded part of the investment plans approved for activities in non-agriculture sectors, such as tourism and handicrafts (Millions of US\$).	Millions US \$	BMI	Administrative Data	Quarterly	BMI
Number of loans granted by the Investment Support Fund (FIDENORTE)	Number of loans that have been granted by FIDENORTE	Number	BMI	Administrative Data (FIDENORTE's beneficiaries register)	Quarterly	BMI
Number of loans granted by the Investment Support Fund (FIDENORTE) – Agriculture Producers	Number of loans that have been granted by FIDENORTE to agriculture producers.	Number	BMI	Administrative Data (FIDENORTE's beneficiaries register)	Quarterly	BMI
Number of loans granted by the Investment Support Fund (FIDENORTE) – Agribusinesses	Number of loans that have been granted by FIDENORTE's value chain activity (cadenas) to agribusinesses involved in value-added activities.	Number	BMI	Administrative Data (FIDENORTE's beneficiaries register)	Quarterly	BMI
Number of loans granted by the Investment Support Fund (FIDENORTE) – Non-agriculture	Number of loans that have been granted by FIDENORTE in non-agriculture sectors, such as tourism and handicrafts.	Number	BMI	Administrative Data (FIDENORTE's beneficiaries register)	Quarterly	BMI

Output Indicators						
Value of agricultural and rural loans (US \$Million)	Total value of agricultural and/or rural loan funds for on-farm, off-farm, and rural investments. This indicator combines the indicators : “Amount of Investment Support fund (FIDENORTE) approved – Agriculture” plus “Value of loans guaranteed – Agriculture)”	US \$ Million	BMI	Administrative Data (FIDENORTE’s beneficiaries register)	Quarterly	BMI
Number of guarantees granted	Number of guarantees granted with FOMILENIO funding, including PROGARA and SGR.	Number	PROGARA, SGR and BMI	Administrative Data	Quarterly	BMI
Value of loans guaranteed	Value of loans guaranteed with FOMILENIO funding, including PROGARA and SGR.	US\$ Million	PROGARA, SGR and BMI	Administrative Data	Quarterly	BMI
Value of loans guaranteed – Agriculture	Value of loans guaranteed with FOMILENIO funding, including PROGARA and SGR for agriculture-related activities.	US\$ Million	PROGARA, SGR and BMI	Administrative Data	Quarterly	BMI
Value of loans guaranteed – Non-agriculture	Value of loans guaranteed with FOMILENIO funding, including PROGARA and SGR for non-agriculture-related activities.	US\$ Million	PROGARA, SGR and BMI	Administrative Data	Quarterly	BMI

Process Indicators						
Service Providers 2 Contracted	Date Service Providers 2 are contracted by bidding process to implement activities of PRONORTE.	Date	FOMILENIO	Administrative Data (FOMILENIO)	Once per each SP2	FOMILENIO
FIDENORTE constituted	Date constitution document legalized and initial amount registered.	Date	BMI / FIDENORTE	Administrative Data of FIDENORTE	Once	BMI

PROGARA NORTE constituted and capitalized with FOMILENIO's funds.	Date of creation of special program to attend beneficiaries of PDP within PROGARA.	Date	BMI / PROGARA	Administrative Data of PROGARA	Once	BMI
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Connectivity Project						
Indicators	Definition of Indicators	Measurement Units	Source of Data	Method of Data Collection	Frequency and periods	Reporting Agency to FOMILENIO
<b>Goal Indicators</b>						
Increase in income of households near the Northern Transnational Highway	Increase in income of households within 2km of the Northern Transnational Highway	%	DIGESTYC	Panel survey	2012	DIGESTYC
Land prices along the Northern Transnational Highway	Average price of land 2km on either side of the Northern Transnational Highway (weighted average of all road sections to be opened or improved)	US\$ / m <sup>2</sup>	DIGESTYC	Panel survey	2012	DIGESTYC
<b>Objective/Outcome Indicators</b>						
Travel time from Guatemala to Honduras through the Northern Zone (hours)	Number of hours required to travel from Guatemala to Honduras through the Northern Zone	Hours	Baseline estimated by MOP	Baseline estimated by MOP / Estimation after the project by Travel time study	Before and after the project	MOP
Vehicle operating costs on the Northern Transnational Highway	Cost per vehicle (pick-up truck) per km of combustibles, lubricants, tires, depreciation, maintenance and repair for travel on the Northern Transnational Highway	US\$ per pick-up truck per km	Baseline estimated by MOP	HDM-4 analysis performed by MOP and confirmed by feasibility study	Before and after project	MOP
Annual average daily traffic on the Northern Transnational Highway	Average number of vehicles that transit the Northern Transnational Highway daily	Number of vehicles per day	MOP	Traffic study (baseline confirmed by	Before and after each road section	MOP

Connectivity Project						
Indicators	Definition of Indicators	Measurement Units	Source of Data	Method of Data Collection	Frequency and periods	Reporting Agency to FOMILENIO
				feasibility study)	is improved	
Average International road Roughness Index (IRI) of the Northern Transnational Highway	Weighted average IRI of the entire Transnational Highway	m/km	MOP	Road roughness study	Before and after each road section is improved	MOP
<b>Output Indicators</b>						
Kilometers of roads completed	The length of roads in kilometers on which construction or rehabilitation is complete.	Kilometers	Supervisory Firm	Administrative data	Quarterly	MOP
<b>Process Indicators</b>						
Kilometer of Northern Transnational Highway with Final Design finished.	Kilometers of NTH with the final design of road opening, existing paved road rehab and upgrading of dust roads, finished (including GOES funded designs).	Kilometers	CPM	Administrative data	Quarterly	UIPC/VMOP
Kilometer of Northern Transnational Highway under design (contracted).	The length of roads in kilometers under design contracts. This may include building new roads, modifying existing roads, reconstruction, rehabilitation, resurfacing or upgrading.	Kilometers	CPM	Administrative data	Quarterly	UIPC/VMOP
Kilometer of roads under works contracts.	The length of roads in kilometers under works contract for construction or rehabilitation. This may include building new roads or modifying existing roads.	Kilometers	CPM	Administrative data	Quarterly	UIPC/VMOP
Value of signed contracts for road works	The value in US\$ of all contracts that MCAs have signed with contractors for	US \$Million	Procurement Agent	Administrative records	Quarterly	Procurement Agent

Connectivity Project						
Indicators	Definition of Indicators	Measurement Units	Source of Data	Method of Data Collection	Frequency and periods	Reporting Agency to FOMILENIO
	construction of new or rehabilitated roads.					
Value of contracted roads works disbursed (US\$Million)	Amount disbursed for all signed contracts for construction of new or rehabilitated roads.	US \$Million	Fiscal Agent	Administrative records	Quarterly	Fiscal Agent
Percent of contracted roads works disbursed	The aggregate amount disbursed divided by all signed contracts for construction of new or rehabilitated roads. (cumulative)	%	Fiscal Agent	Administrative records	Quarterly	Fiscal Agent
Value of signed contracts for feasibility, design, supervision and program management road contracts.	The value of all contracts that MCAs have signed with contractors to develop feasibility and/or design studies for systems of roads.	US \$ Million	Procurement Agent	Administrative records	Quarterly	Procurement Agent
Value disbursed for road contracted studies and supervision (US\$Million)	Amount disbursed for all signed contracts to develop feasibility and/or design studies for systems of roads.	US \$Million	Fiscal Agent	Administrative records	Quarterly	Fiscal Agent
Percent disbursed for road contracted studies and supervision	The aggregate amount disbursed divided by all signed contracts to develop feasibility and/or design studies for systems of roads.	%	Fiscal Agent	Administrative records	Quarterly	FiscalAgent

#### **Annex 4. M&E Plan Revision #1 – June 2008**

The first revision to the M&E Plan included two revisions:

- (1) Process milestone indicators were included for the first time.
- (2) Goal indicator targets were modified.

## **Annex 5. M&E Plan Revision #2 – March 2009**

The second revision to the M&E Plan included the following revisions:

- (1) Define additional indicators for PDP in order to respond to agriculture and non-agriculture beneficiaries, as well as agribusiness.
- (2) Elimination of indicators related to Network Connecting Roads
- (3) Define more indicator targets for next years.
- (4) Explain the impact evaluations preparation process.
- (5) Update the Main Economic and Social Indicators of NZ.



## **Annex 6. M&E Plan Revision #3 – February 2011**

The third revision to the M&E Plan included the following revisions:

- (1) MTR Methodology
- (2) After MTR the adjustments (targets, indicators, ERR) were performed to every Project. PDP ERR is pending.
- (3) Targets Indicator establishment
- (4) Common Indicators incorporation.
- (5) Update on evaluation process of PDP.